BID DOCUMENTS

including Specifications
for construction of:

The
COUNTY OF MENDOCINO

Electric Vehicle Charging Parking Stalls Project

at
501 Low Gap Road
and
727 South State Street
Ukiah, CA 95482

Prepared by:
FACILITIES & FLEET DIVISION
851 LOW GAP ROAD
UKIAH, CA 95482

BID# 001-25

Date of Issue
January 21, 2025

SECTION 00 50 00

AGREEMENT FOR LUMP SUM BID

THIS AGREEMENT made effective on the date it becomes fully executed by all parties, between the County of Mendocino, hereinafter called COUNTY, and Ferranti Construction, Inc. a California Corporation, hereinafter called CONTRACTOR.

COUNTY and CONTRACTOR, for the consideration described below named, agree as follows:

FIRST:THE CONTRACTOR shall furnish all labor, materials, equipment, mechanical workmanship, transportation, and services for the installation and completion of the **Electric Vehicle Charging Parking Stalls Project**, in accordance with the contract documents, including the Addenda thereto, all as adopted by COUNTY.

SECOND: The work under this contract described below shall be completed within one hundred twenty (120) calendar days from the date of the "Notice to Proceed".

THIRD: The Contract consists of the following documents, all of which are fully a part hereof as if herein set out in full, whether or not hereto attached:

1. Invitation to Bid
2. Instructions to Bidders
3. Bidding Documents
4. Agreement
5. General Conditions
6. Unforeseen Physical Conditions
7. Summary of Work
8. Temporary Facilities and Building Services
9. Project Plans and Drawings
10. Technical Specifications
11. Addendum to the Bid

FOURTH: COUNTY shall pay to CONTRACTOR, if CONTRACTOR is successful bidder, as full consideration for the faithful performance of the Contract the sum of:

Five Hundred Sixty-Six Thousand Nine Hundred and Seventy-Six Dollars and Eighty-Five Cents ($566,976.85)

This sum constitutes the total base bid and the following allowance:

Allowance No #01 Unforseen Conditions: Twenty Thousand Dollars ($20,000.00)

Payment shall be made each month to CONTRACTOR in accordance with and subject to the provisions embodied in the Documents made a part of this Contract.

IN WITNESS WHEREOF

DEPARTMENT FISCAL REVIEW:

Darcie Antle

DEPARTMENT HEAD DATE 03/24/2025

Budgeted: ☒ Yes ☐ No

Budget Unit: 1710

Line Item: 864360 CI071

Grant: ☒ Yes ☐ No

Grant No.: ARV-22-003

CONTRACTOR/COMPANY NAME

By: [signature]

Date: 4/3/2025

NAME AND ADDRESS OF CONTRACTOR:

Ferranti Construction, Inc. a California Corporation

P.O. Box 259

Redwood Valley, CA 95472

COUNTY OF MENDOCINO

By: John Haschak

JOHN HASCHAK, Chair
BOARD OF SUPERVISORS

Date: 04/22/2025

By signing the above, signatory warrants and represents that he/she executed this Agreement in his/her authorized capacity and that by his/her signature on this Agreement, he/she or the entity upon behalf of which he/she acted, executed this Agreement.

ATTEST:

DARCIE ANTLE, Clerk of said Board

By: [signature]
Deputy 04/22/2025

I hereby certify that according to the provisions of Government Code section 25103; delivery of this document has been made.

DARCIE ANTLE, Clerk of said Board

By: [signature]
Deputy 04/22/2025

COUNTY COUNSEL REVIEW:

APPROVED AS TO FORM:

By: [signature]
COUNTY COUNSEL

Date: 03/24/2025

INSURANCE REVIEW:

By: Darcie Antle
Risk Management

Date: 03/24/2025

EXECUTIVE OFFICE/FISCAL REVIEW:

By: [signature]
Deputy CEO or Designee

Date: 03/24/2025

Signatory Authority: $0-25,000 Department; $25,001- 50,000 Purchasing Agent; $50,001+ Board of Supervisors
Exception to Bid Process Required/Completed ☐ _____
Mendocino County Business License: Valid ☐
Exempt Pursuant to MCC Section: _____

SECTION 00 00 20

PROJECT DIRECTORY

PROJECT:	Electric Vehicle Charging Parking Stalls Project 501 Low Gap Rd. 727 South State Street Ukiah, CA 95482
OWNER:	County of Mendocino 851 Low Gap Road Ukiah, CA 95482 (707) 234-6050
AGENT:	County of Mendocino Executive Office Facilities and Fleet Division 851 Low Gap Road Ukiah, CA 95482 Office: (707) 234-6058 Mobile: (707) 380-3223 vierak@mendocinocounty.gov Kirk Viera, Facility Project Specialist I
ARCHITECT:	EVA Green Power 2445 Impala Drive Carlsbad, CA 92010 (760)889-8664 www.evagreenpower.com

SECTION 00 00 50

TABLE OF CONTENTS

END OF SECTION

COUNTY OF MENDOCINO
Executive Office
Facilities & Fleet Division

DARCIE ANTLE
Chief Executive Officer
Clerk of the Board
Purchasing Agent

851 Low Gap Road
Ukiah, CA 95482

Email: facilities@mendocinocounty.gov

Office:(707)234-6068

COUNTY OF MENDOCINO ♦ BID ADDENDUM

Electric Vehicle Charging Stations BID No. 001-25
501 Low Gap Road & 727 South State Street

Addendum No.	**02**
Addendum Issue Date:	**March 10, 2025**
Bid Issue Date:	***January 21, 2025***
Bid Opening Date:	**March 13, 2025**

INQUIRIES AND CLARIFICATIONS TO PROJECT PLANS AND SPECIFICATIONS

The additions, omissions, clarifications, and/or corrections herein shall be made part of the Contract plans and specifications and shall be included in the Scope of Work and proposals to be submitted. This Addendum modifies the original plans and specifications as described below.

Global

1. **Bidder Question:** Will the COUNTY allow the conduit to be installed from the transformer to switchboard using a horizontal directional drilling method instead of open trench?

   County Response: Yes, the County will allow Directional Boring with the following specifications: Conduit shall be Schedule 40, maximum 36° bends, 4" mandrel must be able to pass through going both directions, Conduit shall be a minimum of 48" deep to top of conduit, Mule-Tape (pull tape) shall be installed.

2. **Bidder Question:** Will a special compaction test be required?

   County Response: Yes, the City of Ukiah utility installation requires compaction testing and inspection by the City Engineer. Trench patching in paved areas requires compaction testing. The County will retain a firm for special inspection and testing.

3. **Bidder Question:** Can the new ADA parking areas at both locations be installed in concrete instead of asphalt?

   County Response: The contractor has the option to install ADA parking areas in concrete or asphalt. Patch asphalt to new concrete for a smooth transition.

4. **Bidder Question:** The Plans do not show any Bollards for the 501 Low Gap site. Will there be additional Bollards at the 501 Low Gap site?

   County Response: See revised sheets E-201 and City of Ukiah installation plan for bollard requirements.

5. **Bidder Question:** **T**he Bid Form Section 00-31-00 page 1 of 2 shows a $20,000 allowance. Will this sum need to be included in the total base bid or will it be added to the total base bid.

County Response: The $20,000 allowance is intended for unforeseen conditions. The project will be awarded based on Total Base Bid without consideration of the allowance. See Instruction to Bidder Section 00-10-00 Page 2 of 5 paragraph 1.5 Award or Rejection of bids. The County may add the allowance to the Total Base Bid in awarding the contract.

501 Low Gap Road

6. **Bidder Question:** How is power provided to the Juvenile Hall during the installation of the transformer?

County Response: The Juvenile Hall Facility needs to maintain electrical power. The County will provide a portable generator on site. The Contractor will be responsible for connecting and operating the generator during the time the panel is off line, coordinate with the County.

7. **Bidder Question:** The Sidewalk area has several lifted and uneven trip hazard areas. Does the county want the entire sidewalk area to be demolished?

County Response: Yes, refer to revised sheet 501 Low Gap Road E-201.

8. **Bidder Question:** How will the Contractor address the existing water lines that are in the location of the trenching for the new Transformer?

County Response: The Contractor will need to dig under the existing water line. Hand digging is advised. The contractor is responsible for any damage to the water line.

9. **Bidder Question:** The Sheet note on E-201 states Utility primary TBD in field, Sheet E-401 – Note 1 says to assume 200' for the primary run. Please clarify primary conduit requirements.

County Response: Refer to City of Ukiah installation plans for utility requirements that are noted as the Contractor's Responsibility.

727 South State Street.

10. **Bidder Question:** Details show the EV concrete pedestals flush with the asphalt. The asphalt parking lot has a slope, so are the pedestals going to be raised above the asphalt?

County Response: The Concrete pedestal shall be level with the high point of the slope. Chamfer exposed edges of the concrete pedestals.

11. **Bidder Question:** Can the canvas shade system be removed between the two buildings at 727 S State Street?

County Response: Yes, the shade system between the two buildings can be temporarily removed. The contractor is responsible to replace the system to its original or better condition.

12. **Bidder Question:** The Handicap stalls show a 6" curb. Will this be in front or behind the Charging Stations?

13. **County Response:** For the ramp at the ADA, see Detail 7 Sheet A1.3. The curb is less than 6". The Charging Station will be mounted at the lower elevation. The Contractor will need to build with width and slope constraints in mind.

ADDITIONAL INFORMATION

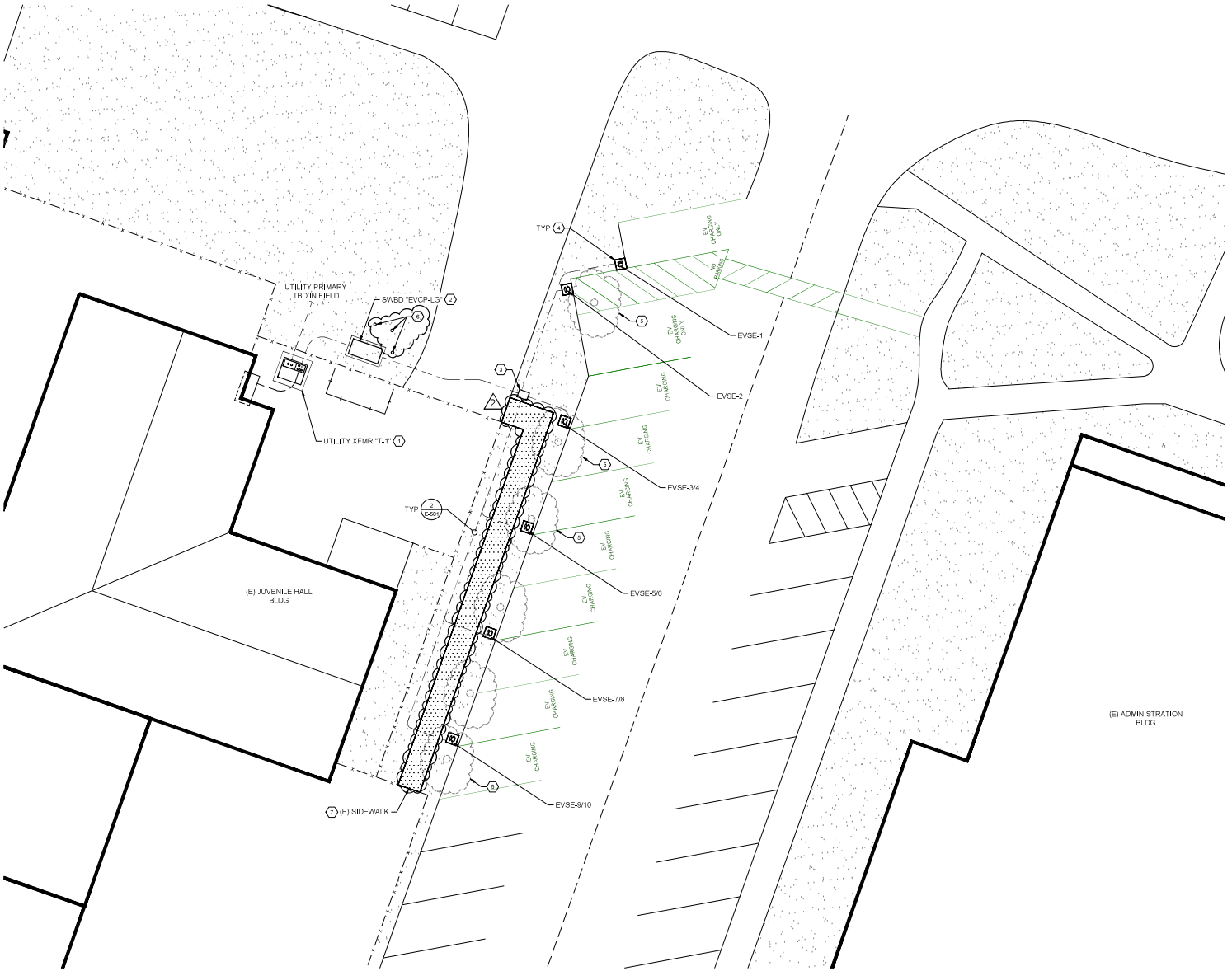
Replace the following existing 501 Low Gap plan sheets with the following attached revised plan sheets:
501 Low Gap Road E-201 - Power Plan
501 Low Gap Road E-501 – Equipment and Electrical Details

Replace the following existing 727 South State Street plan sheets with the following attached revised plan sheets:
727 South State Street E-201– Power Plan
727 South State Street E-501– Equipment and Electrical Details

All other specifications remain in full force and effect.

Bidders are reminded that they shall complete the Addenda Acknowledgement on the Bid Form. Failure to do so may result in disqualification of the submitted bid.

Any questions or concerns regarding this matter should be directed to **Kirk Viera**, Facilities Project Specialist, at vierak@mendocinocounty.gov Office (707) 234-6058 Mobile (707)380-3223



SHEET NOTES:

1. REFER TO SINGLE LINE DIAGRAM ON SHEET E-401 FOR ADDITIONAL INFORMATION.
2. CONDUIT ROUTING IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ELECTRICAL EQUIPMENT AND RACEWAYS PER FIELD CONDITIONS.
3. FOR EVSE AND ELECTRICAL EQUIPMENT MOUNTING DETAILS, SEE SHEET A1.2.
4. FOR ALL REQUIRED SITE MODIFICATIONS RELATED TO EV CHARGER INSTALLATION. SEE SHEET A1.2.
5. EV CHARGER INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE AT JOB SITE FOR BUILDING DEPARTMENT INSPECTIONS.

KEY NOTES:

1. CONTRACTOR IS RESPONSIBLE FOR PRIMARY AND SECONDARY CONDUIT FOR THE NEW SERVICE TRANSFORMER. INSTALL PER UTILITY/CITY REQUIREMENTS. THE UTILITY WILL SET THE TRANSFORMER ON THE EXISTING TRANSFORMER PAD, PULL WIRE, AND MAKE READY. COORDINATE WITH COUNTY FOR MAINTAINING ELECTRICAL POWER TO THE EXISTING JUVENILE HALL BUILDING DURING WORK TO MINIMIZE DOWNTIME.
2. PROVIDE SERVICE RATED SWITCHBOARD ON CONCRETE PAD PER 11/A1.2.
3. PROVIDE 18"Lx24"Wx18"D IN GROUND PULLBOX.
4. PROVIDE EVSE, PEDESTAL, AND CONCRETE PAD PER 8/A1.2. CONTRACTOR SHALL INSTALL CUSTOM DECALS PROVIDED BY THE OWNER.
5. CONTRACTOR TO DETERMINE IN FIELD IF REMOVAL OF EXISTING TREES IS NECESSARY FOR INSTALLATION OF EV CHARGERS AND ASSOCIATED RACEWAYS. INCLUDE REMOVAL OF (3) TREES AND REPLACEMENT WITH MULCH TO MATCH EXISTING LANDSCAPE FOR BIDDING PURPOSES. OWNER INTENT IS FOR TREES TO REMAIN WHERE POSSIBLE. EV CHARGER LOCATIONS MAY SHIFT IN EITHER DIRECTION AS REQUIRED TO REDUCE QUANTITY OF TREES TO BE REMOVED SUBJECT TO MAINTAINING SERVICE TO CHARGING SPACES AS SHOWN. CONSIDER USE OF OPTIONAL 25FT CORDS VS STANDARD 18FT CORDS WHERE EV CHARGERS ARE SHIFTED FOR TREES.
6. PROVIDE BOLLARDS AROUND EQUIPMENT AS SHOWN. MAINTAIN 3FT EQUIPMENT CLEARANCE. INSTALL PER UTILITY/CITY REQUIREMENTS.
7. DEMOLISH AND REMOVE EXISTING SIDEWALK. REPLACE WITH MULCH AND LEVEL AREA TO MATCH EXISTING CONDITIONS.

N

SCALE: 1/8" = 1'-0"

0 4 8 16

CLIENT

841 LOW GAP RD
UKIAH, CA 95482

EVA Green Power

2445 IMPALA DRIVE
CARLSBAD, STATE ZIP

4STEL

26030 ACERO
MISSION VIEJO, CA 92691

STAMP

E22787
EXP: 08/30/2025

COUNTY OF MENDOCINO EV CHARGERS

501 LOW GAP ROAD
UKIAH, CA 95482

REVISIONS:

1	11/13/2024	ADDENDUM 1
2	02/28/2025	BID ADDENDUM

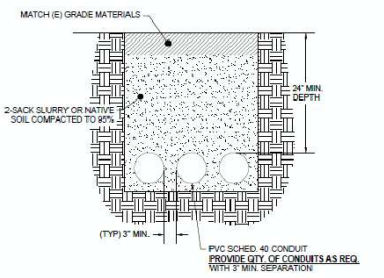
PROJECT #:	23-019
SUBMITTAL:	100%CD
DRAWN BY:	CDS
REVIEWED BY:	AJS
SCALE:	AS NOTED
DATE:	09/19/2024

SHEET NAME:

POWER PLAN

SHEET NUMBER:

E-201



2 <600V CONDUIT TRENCH
SCALE: NTS

chargepoint

ChargePoint ® AC Commercial Station

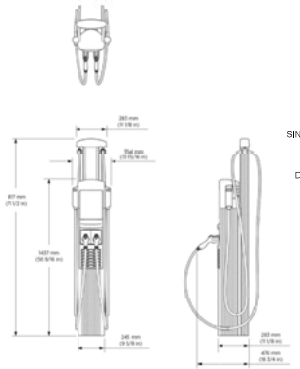
Specifications and Ordering Information

Dual port, pedestal mount, 18 ft cable

CP6000 AC Commercial Station Specifications

Architectural Drawings and Dimensions

Pedestal Mount



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CP6000 AC Commercial Station Specifications

General Specifications

Electrical Input

The CP6000 AC Commercial Station supports flexible electrical input/output settings up to 80A to fit your fueling needs, whether for a workplace, multi-family dwelling, or other application.

Power Select allows stations to be installed and configured for current lower than the maximum 80A. Power Select current options include 16A, 24A, 32A, 40A, 48A, 50A, 56A, 64A, and 72A.

Power Share allows a dual-port station to share power from a single circuit across two ports, adjusting power depending on whether one or both are charging. Standard wiring uses an independent circuit for each port. Power Share can be used in combination with Power Select.

SINGLE PORT PEDESTAL

DUAL PORT PEDESTAL

Station	Electrical Input	Single Port (AC Voltage 208 / 240V AC)			Dual Port (AC Voltage 208 /240V AC)		
		Input Current	Input Power Connection	Required Panel Breaker	Input Current	Input Power Connection	Required Panel Breaker
80A	Maximum 80A (Standard)	80A	One 100A branch circuit	100A dual pole (non-GFCI)	80A x 2	Two independent 100A branch circuits	100A dual pole (non-GFCI) x 2
	Maximum 80A (Power Share*)	N/A	N/A	N/A	80A	One 100A branch circuit	100A dual pole (non-GFCI)
	Power Select** 16A - 72A (standard)	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A)	16A - 72A x 2	Two independent branch circuits rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A) x 2
	Power Select 16A - 72A (Power Share)	N/A	N/A	N/A	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input

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CP6000 AC Commercial Station Specifications

SINGLE PORT PEDESTAL

DUAL PORT PEDESTAL

							current (20A - 90A)
50A	Maximum 50A (Standard)	50A	One 70A branch circuit	70A dual pole (non-GFCI)	50A x 2	Two independent 70A branch circuits	70A dual pole (non-GFCI) x 2
	Maximum 80A (Power Share*)	N/A	N/A	N/A	80A	One 70A branch circuit	70A dual pole (non-GFCI)
	Power Select** 16A - 48A (Standard)	16A - 48A	One branch circuit rated 125% of input current (24A - 60A)	Dual pole (non-GFCI) rated 125% of input current (30A-60A)	16A - 48A x 2	Two independent branch circuits rated 125% of input current (20A - 60A)	Dual pole (non-GFCI) rated 125% of input current (20A - 60A) x 2
	Power Select 16A - 65A (Power Share)	N/A	N/A	N/A	16A - 48A	One branch circuit rated 125% of input current (20A - 60A)	Dual pole (non-GFCI) rated 125% of input current (20A - 60A)
	Service Panel/Breaker GFCI	Do not provide external GFCI as it may conflict with internal GFCI (CCID)					
	Wiring – Standard	3-wire (L1, L2, Earth) No neutral			5-wire (L1, L1, L2, L2, Earth)		
	Wiring – Power Share	N/A			3-wire (L1, L2, Earth)		
	Station Power	8 W typical (standby), 15 W maximum (operation)					
	Line to Ground Voltage	120V +/- 10%					

Electrical Output for 80A Station

Electrical Output	Single Port (AC Voltage 208 / 240V AC)	Dual Port (AC Voltage 208 / 240V AC)
Maximum 80A (Standard)	19.2 kW (240V AC @ 80A)	19.2 kW (240V AC @ 80A)
Maximum 80A (Power Share)	N/A	19.2 kW (240V AC @ 80A) : 1 or 9.6 kW (240V AC @ 40A) x 2
Power Select 16A - 72A (Standard)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A) x 2

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CP6000 AC Commercial Station Specifications

Mounting and Functional Interfaces

Connector Type	SAE J1772™
Number of Ports	Single, dual
Mounting	Pedestal, wall
Cable Length	18 ft (5.5 m), 23 ft (7m)
Cable Management	Yes
Authentication and Payment	RFID: ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) NFC (Tap to Charge) Remote: mobile and in vehicle(if supported by vehicle) Contactless credit card EMV chip credit card (for -CH3* models only)
Locking Holster	Yes
ISO 15118 Protocol	Supported by hardware
Display	Full color 8-inch interactive display with full motion video, UV protection, gesture touch controls, and multi-language support

Safety and Connectivity Features

Ground Fault Detection	20 mA CCID with auto retry
Open Safety Ground Detection	Continuously monitors presence of safety (green wire) ground connection.
Plug-Out Detection	Power terminated per SAE J1772™ specifications
Energy Measurement	Meter accuracy 1% Accuracy class 2.0 Acceptance tolerance 1.0%
Power Report/Store Interval	15-minute interval aligned to hour. Responsive to load management signals
Local Area Network	Wi-Fi 2.4 GHz and 5GHz (802.11 a/n/b/g)
Wide Area Network	LTE Category 4
Network Communication Protocol	OCPP 2.0.1
Ethernet connection	Capable with accessory

Safety and Operational Ratings

Station Enclosure Rating	Type 3R per UL 50E
Safety and Compliance	UL and cUL listed; complies with UL 2594, UL 2231-1, UL 2231-2, and NEC Article 625 Energy Star (Dual Port Only) CTEP

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CP6000 AC Commercial Station Specifications

Station Surge Protection	6 kV @ 3,000A. In geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	FCC Part 15 ClassB
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
Non-Operating Temperature	-40°C to 80°C (-40°F to 140°F)
Terminal Block Temperature Rating	105°C (221°F)
Operating Humidity	Up to 85% @ 50°C (122°F) non-condensing
Non-Operating Humidity	Up to 85% @ 50°C (122°F) non-condensing

ChargePoint, Inc. reserves the right to alter product offerings and specifications at any time without notice and is not responsible for typographical or graphical errors that may appear in this document.

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1 EV CHARGER SPECIFICATION: CHARGEPOINT CP6000, 80A
SCALE: NTS

CLIENT

COUNTY OF MENDOCINO
841 LOW GAP RD
UKIAH, CA 95482

EVA Green Power
2445 IMPALA DRIVE
CARLSBAD, STATE ZIP

4STEL
26030 ACERO
MISSION VIEJO, CA 92691

STAMP

E22797
EXP: 09/30/2025

COUNTY OF MENDOCINO EV CHARGERS

501 LOW GAP ROAD
UKIAH, CA 95482

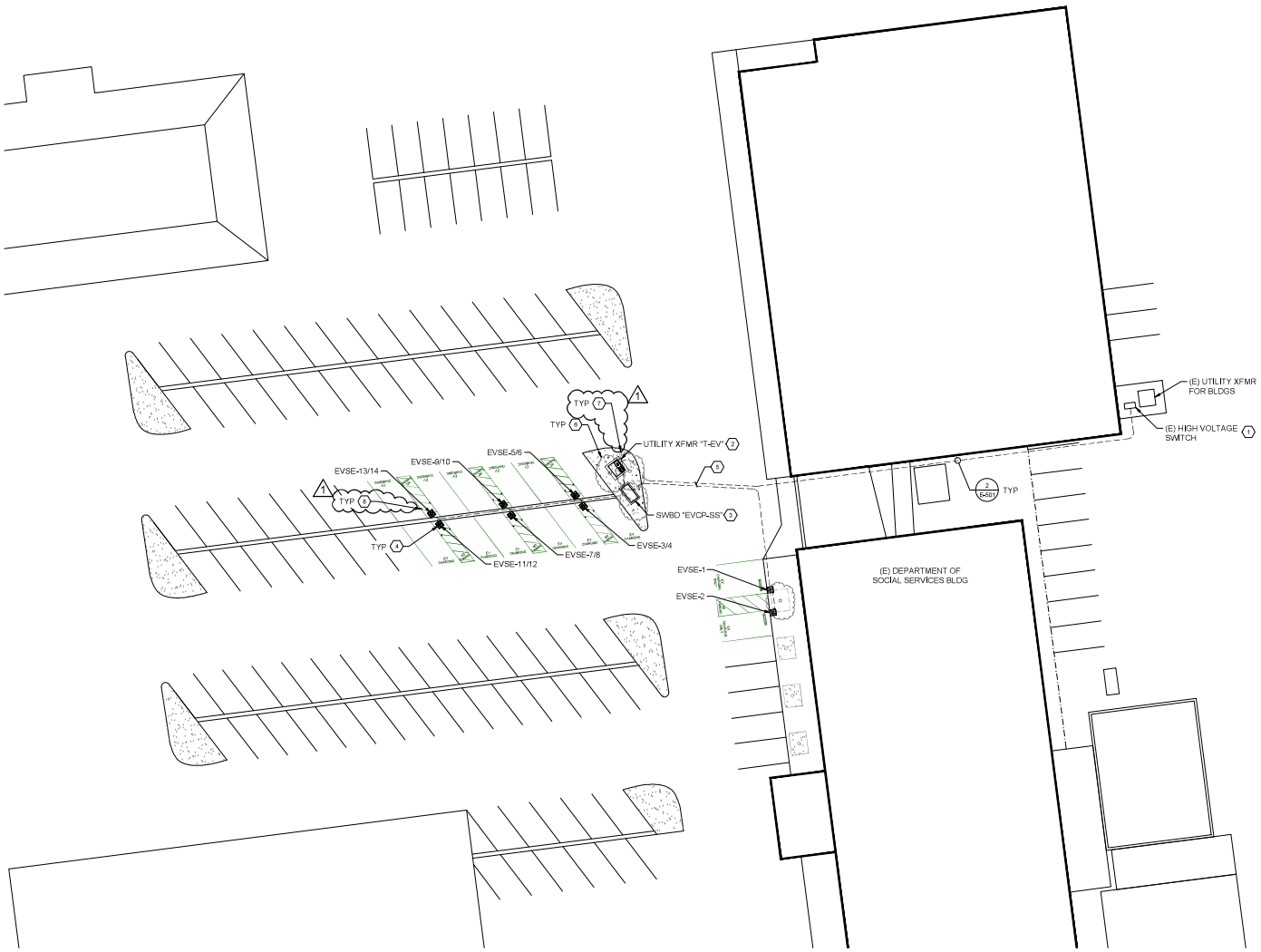
REVISIONS:

1	11/13/2024	ADDENDUM 1
2	02/26/2025	BID ADDENDUM

PROJECT #:	23-019
SUBMITTAL:	100%CD
DRAWN BY:	CDS
REVIEWED BY:	AJS
SCALE:	AS NOTED
DATE:	09/19/2024

SHEET NAME:
EQUIPMENT AND ELEC. DETAILS

SHEET NUMBER:
E-501



SHEET NOTES:

1. REFER TO SINGLE LINE DIAGRAM ON SHEET E-401 FOR ADDITIONAL INFORMATION.
2. CONDUIT ROUTING IS DIAGRAMMATIC. CONTRACTOR IS RESPONSIBLE FOR COORDINATING ELECTRICAL EQUIPMENT AND RACEWAYS PER FIELD CONDITIONS.
3. FOR EVSE AND ELECTRICAL EQUIPMENT MOUNTING DETAILS, SEE SHEET A1.3.
4. FOR ALL REQUIRED SITE MODIFICATIONS RELATED TO EV CHARGER INSTALLATION, SEE SHEETS A1.2 & A1.3.
5. EV CHARGER INSTALLATION INSTRUCTIONS SHALL BE AVAILABLE AT JOB SITE FOR BUILDING DEPARTMENT INSPECTIONS.

KEY NOTES:

1. UTILITY POC FOR XFMR "T-EV". COORDINATE WITH CITY OF UKIAH ELECTRIC UTILITY DURING INSTALLATION FOR ADDITIONAL REQUIREMENTS.
2. PROVIDE CONCRETE PAD FOR 150KVA TRANSFORMER PER UTILITY SPECIFICATIONS. UTILITY TO PROVIDE AND INSTALL NEW TRANSFORMER.
3. PROVIDE SERVICE RATED SWITCHBOARD ON CONCRETE PAD PER 10/A1.3.
4. PROVIDE EVSE, PEDESTAL AND CONCRETE PAD PER 3/A1.3. CONTRACTOR SHALL INSTALL CUSTOM DECALS PROVIDED BY THE OWNER.
5. MAINTAIN MINIMUM 6" SEPARATION BETWEEN HIGH VOLTAGE AND LOW VOLTAGE RACEWAYS. USE OF A SHARED TRENCH IS ACCEPTABLE.
6. EXISTING TREES IN CONFLICT WITH EQUIPMENT AND RACEWAY INSTALLATION SHALL BE REMOVED AS REQUIRED.
7. PROVIDE BOLLARDS FOR ELECTRICAL EQUIPMENT PER CITY/UTILITY REQUIREMENTS.
8. PROVIDE BOLLARDS FOR EVSE PER DETAIL 12/A1.3.

N

SCALE: 1/16" = 1'-0"

0 8 16 32

CLIENT

COUNTY OF MENDOCINO

841 LOW GAP RD
UKIAH, CA 95482

EVA Green Power

2445 IMPALA DRIVE
CARLSBAD, STATE ZIP

4LEL ENGINEERING

26030 ACERO
MISSION VIEJO, CA 92691

STAMP

E22797
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA
EXP: 06/30/2025

COUNTY OF MENDOCINO EV CHARGERS

727 SOUTH STATE STREET
UKIAH, CA 95482

REVISIONS:

1	02/26/2025	BID ADDENDUM

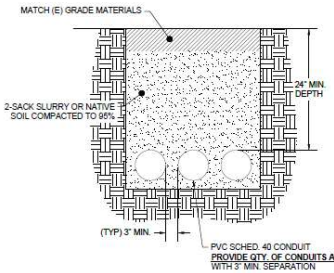
PROJECT #:	23-019
SUBMITTAL:	100%CD
DRAWN BY:	CDS
REVIEWED BY:	AJS
SCALE:	AS NOTED
DATE:	09/19/2024

SHEET NAME:

POWER PLAN

SHEET NUMBER:

E-201



2 <600V CONDUIT TRENCH
SCALE: NTS

chargepoint

ChargePoint ® AC Commercial Station

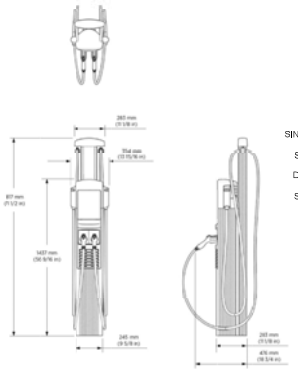
Specifications and Ordering Information

Dual port, pedestal mount, 18 ft cable

CP6000 AC Commercial Station Specifications

Architectural Drawings and Dimensions

Pedestal Mount



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CP6000 AC Commercial Station Specifications

General Specifications

Electrical Input

The CP6000 AC Commercial Station supports flexible electrical input/output settings up to 80A to fit your fueling needs, whether for a workplace, multi-family dwelling, or other application.

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Power Share allows a dual-port station to share power from a single circuit across two ports, adjusting power depending on whether one or both are charging. Standard wiring uses an independent circuit for each port. Power Share can be used in combination with Power Select.

SINGLE PORT PEDESTAL SELECTION

DUAL PORT PEDESTAL SELECTION

Station	Electrical Input	Single Port (AC Voltage 208 / 240V AC)			Dual Port (AC Voltage 208 /240V AC)		
		Input Current	Input Power Connection	Required Service Panel Breaker	Input Current	Input Power Connection	Required Service Panel Breaker
80A	Maximum 80A (Standard)	80A	One 100A branch circuit	100A dual pole (non-GFCI)	80A x 2	Two independent 100A branch circuits	100A dual pole (non-GFCI) x 2
	Maximum 80A (Power Share*)	N/A	N/A	N/A	80A	One 100A branch circuit	100A dual pole (non-GFCI)
	Power Select** 16A - 72A (Standard)	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A)	16A - 72A x 2	Two independent branch circuits rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A) x 2
	Power Select 16A - 72A (Power Share)	N/A	N/A	N/A	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A) x 2

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CP6000 AC Commercial Station Specifications

50A	Maximum 50A (Standard)	50A	One 70A branch circuit	70A dual pole (non-GFCI)	50A x 2	Two independent 70A branch circuits	70A dual pole (non-GFCI) x 2
	Maximum 64A (Power Share*)	N/A	N/A	N/A	80A	One 70A branch circuit	70A dual pole (non-GFCI)
	Power Select** 16A - 48A (Standard)	16A - 48A	One branch circuit rated 125% of input current (26A - 60A)	Dual pole (non-GFCI) rated 125% of input current (26A - 60A)	16A - 48A x 2	Two independent branch circuits rated 125% of input current (26A - 60A)	Dual pole (non-GFCI) rated 125% of input current (26A - 60A) x 2
	Power Select 16A - 65A (Power Share)	N/A	N/A	N/A	16A - 48A	One branch circuit rated 125% of input current (26A - 60A)	Dual pole (non-GFCI) rated 125% of input current (26A - 60A) x 2
	Service Panel/Breaker GFCI	Do not provide external GFCI as it may conflict with internal GFCI (CCID)					
	Wiring – Standard	3-wire (L1, L2, Earth) No neutral			5-wire (L1, L1, L2, L2, Earth)		
	Wiring – Power Share	N/A			3-wire (L1, L2, Earth)		
	Station Power	8 W typical (standby), 15 W maximum (operation)					
	Line to Ground Voltage	120V +/- 10%					

SINGLE PORT PEDESTAL SELECTION

DUAL PORT PEDESTAL SELECTION

Electrical Output for 80A Station

Electrical Output	Single Port (AC Voltage 208 / 240V AC)	Dual Port (AC Voltage 208 / 240V AC)
Maximum 80A (Standard)	19.2 kW (240V AC @ 80A)	19.2 kW (240V AC @ 80A)
Maximum 80A (Power Share)	N/A	19.2 kW (240V AC @ 80A) ; 1 or 9.6 kW (240V AC @ 40A) x 2
Power Select 16A - 72A (Standard)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A) x 2

ChargePoint, Inc. | Copyright © 2023 7 of 11

CP6000 AC Commercial Station Specifications

Mounting and Functional Interfaces

Connector Type	SAE J1772™
Number of Ports	Single, dual
Mounting	Pedestal, wall
Cable Length	18 ft (5.5 m), 23 ft (7 m)
Cable Management	Yes
Authentication and Payment	RFID: ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) NFC (Tap to Charge) Remote: mobile and in vehicle(if supported by vehicle) Contactless credit card EMV chip credit card (for -CH2* models only)
Locking Holster	Yes
ISO 15118 Protocol	Supported by hardware
Display	Full color 8-inch interactive display with full motion video, UV protection, gesture touch controls, and multi-language support

Safety and Connectivity Features

Ground Fault Detection	20 mA CCID with auto retry
Open Safety Ground Detection	Continuously monitors presence of safety (green wire) ground connection
Plug-Out Detection	Power terminated per SAE J1772™ specifications
Energy Measurement	Meter accuracy 1% Accuracy class 2.0 Acceptance tolerance 1.0%
Power Report/Store Interval	15-minute interval aligned to hour. Responsive to load management signals
Local Area Network	Wi-Fi 2.4 GHz and 5GHz (802.11 a/n/b/g)
Wide Area Network	LTE Category 4
Network Communication Protocol	OCPP 2.0.1
Ethernet connection	Capable with accessory

Safety and Operational Ratings

Station Enclosure Rating	Type 3R per UL 50E
Safety and Compliance	UL and cUL listed, complies with UL 2594, UL 2231-1, UL 2231-2, and NEC Article 625 Energy Star (Dual Port Only) CTEP

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CP6000 AC Commercial Station Specifications

Station Surge Protection	6 kV @ 3,000A, in geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
ERC Compliance	FCC Part 15 ClassB
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
Non-Operating Temperature	-62°C to 82°C (-80°F to 180°F)
Terminal Block Temperature Rating	105°C (221°F)
Operating Humidity	Up to 85% @ 50°C (122°F) non-condensing
Non-Operating Humidity	Up to 85% @ 50°C (122°F) non-condensing

ChargePoint, Inc. reserves the right to alter product offerings and specifications at any time without notice and is not responsible for typographical or graphical errors that may appear in this document.

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1 EV CHARGER SPECIFICATION: CHARGEPOINT CP6000, 80A
SCALE: NTS

CLIENT

COUNTY OF MENDOCINO

841 LOW GAP RD
UKIAH, CA 95482

EVA Green Power

2445 IMPALA DRIVE
CARLSBAD, STATE ZIP

4STEL ENGINEERING

26030 ACERO
MISSION VIEJO, CA 92691

STAMP

E22797
EXP: 06/30/2025

COUNTY OF MENDOCINO EV CHARGERS

727 SOUTH STATE STREET
UKIAH, CA 95482

REVISIONS:

1	02/26/2025	BID ADDENDUM

PROJECT #:	23-019
SUBMITTAL:	100%CD
DRAWN BY:	CDS
REVIEWED BY:	AJS
SCALE:	AS NOTED
DATE:	09/19/2024

SHEET NAME:
EQUIPMENT & ELEC. DETAILS

SHEET NUMBER:
E-501

COUNTY OF MENDOCINO
Executive Office
Facilities & Fleet Division

DARCIE ANTLE
Chief Executive Officer
Clerk of the Board
Purchasing Agent

851 Low Gap Road
Ukiah, CA 95482

Email: facilities@mendocinocounty.gov

Office:(707)234-6068

COUNTY OF MENDOCINO ♦ BID ADDENDUM

Electric Vehicle Charging Stations Project No. 001-25
501 Low Gap Road & 727 South State Street

Addendum No.	**01**
Addendum Issue Date:	**February 14, 2025**
Bid Issue Date:	***January 21, 2025***
Bid Opening Date:	**March 13, 2025**

THE BID DATE HAS BEEN CHANGED TO MARCH 13, 2025, AT 2:00 PM.
See item B below.

INQUIRIES AND CLARIFICATIONS TO PROJECT PLANS AND SPECIFICATIONS

The additions, omissions, clarifications, and/or corrections herein shall be made part of the Contract plans and specifications and shall be included in the Scope of Work and proposals to be submitted. This Addendum modifies the original plans and specifications as described below.

A) BIDDERS QUESTIONS:

1. **Bidder Question:** Is there a designated staging area for contractor's equipment where it can be protected by temporary fencing?

   County Response: Areas available for staging will be determined at the Pre-Construction meeting.

2. **Bidder Question:** Sheet E201 Indicates work by the City of Ukiah Utility at Transformers. What will the contractor be responsible for at these locations?

   County Response: See attached City of Ukiah Utility work plans for each site for the scope of work required by the contractor.

3. **Bidder Question:** Will the Transformer need to be moved to replace the existing concrete pad?

   County Response: **No,** the new transformer will have the same footprint as the existing transformer.

4. **Bidder Question:** How does the contractor gain access between the building where the trenching will take place? Can fencing panels be removed?

   County Response: The County will provide a temporary lock for the contractor to gain access during the construction process.

B) CHANGES TO THE SPECIFICATIONS

1. REPLACE
   a. SECTION 00 02 00 – NOTICE INVITING BIDS
      Page 1, Paragraph 1 shall be replaced by the following:
      i. "Notice is hereby given that sealed bids will be received at the Mendocino County General Service Agency Office, 841 Low Gap Road, Ukiah, California 95482 until the hour of 2:00 p.m., as determined by the clock on the wall in the General Services Agency Office, on **March 13, 2025,** and then publicly opened and read aloud in the General Service Agency Conference Room, 841 Low Gap Road, Ukiah, California for the following project:"
2. REPLACE
   a. SECTION 00 10 00 – INSTRUCTIONS TO BIDDERS
      Page 1, Number 1.1 BID RECEIVED, Item A shall be replaced by the following:
      i. "Sealed bids for the **Electric Vehicle Charging Parking Stalls Project (BID 001-25)** will be received at the Mendocino County General Service Agency Office, 841 Low Gap Road, Ukiah, California, until 2:00 p.m. as determined by the clock on the wall of the General Service Agency Office, on **March 13, 2025,** and then publicly opened and read aloud in the General Service Agency Conference Room, 841 Low Gap Road, Ukiah, California."

ADDITIONAL INFORMATION

See the attached City of Ukiah Plan Sheets for 501 Low Gap Road and 727 South State Street.

All other specifications remain in full force and effect.

Bidders are reminded that they shall complete the Addenda Acknowledgement on the Bid Form. Failure to do so may result in disqualification of the submitted bid.

Any questions or concerns regarding this matter should be directed to **Kirk Viera**, Facilities Project Specialist, at vierak@mendocinocounty.gov or office: (707) 234-6058 Mobile (707) 380-3223

JUVENILE HALL EV CHARGER

Contractor's Responsibility:

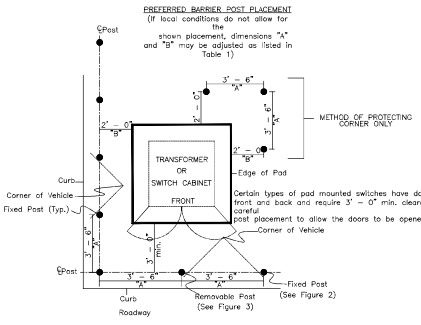
1. Locate existing 150 kVA Transformer:
   - Trench and install 2-4" SCHD 40 conduits to the new 600 amp switchgear location.
   - New conduit to be "punched" into the secondary side of the existing transformer.

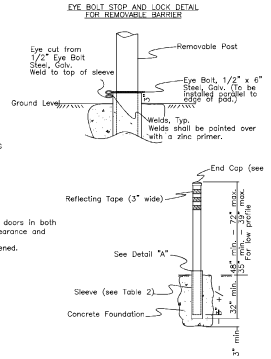
2. After all trenching and conduits to the new switchgear locations are complete the existing transformer will be removed and a new 300 kVA 120/208y transformer will be installed in its place.

3. From the customer side of the new panel trench and install a conduit system to feed each charger.

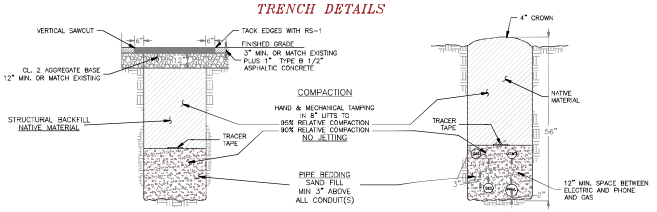
City of Ukiah Electric Utility to:

1. Standby while any and all work is done in or near energized equipment.
   - Remove existing 150 kVA transformer and install new 300 kVA transformer.
   - Run and install new conductor from transformer to new switchgear.
   - Do all connections necessary to make ready and energize.





TRENCH DETAILS



TRENCH SPECIFICATIONS

1) CONFORM TO THESE SPECIFICATIONS AND REQUIREMENTS OF THE CITY ENGINEER.
2) COMPACTION: CONFORM TO SECTION 19-5, "COMPACTION" OF CALTRANS STANDARD SPECIFICATIONS, THESE PLANS, AND REQUIREMENTS OF THE CITY ENGINEER.
3) AGGREGATE SUBBASE: CLASS 3. CONFORM TO SECTION 25, "AGGREGATE SUBBASES", OF CALTRANS STANDARD SPECIFICATIONS. SUBJECT TO CITY ENGINEER'S INSPECTION AND APPROVAL, REUSE EXITING SURFACING AND AGGREGATE BASE. CRUSH A.C. PAVEMENT FOR REUSE AS REQUIRED. IF EXISTING MATERIAL IS INSUFFICIENT IN QUALITY OR QUANTITY USE CLASS 2 AGGREGATE SUBBASE.
4) AGGREGATE BASE: CLASS 2, CONFORM TO SECTION 26, "AGGREGATE BASES", OF CALTRANS STANDARD SPECIFICATIONS.
5) ASPHALT CONCRETE: TYPE B. CONFORM TO SECTION 39, "ASPHALT CONCRETE", OF CALTRANS STANDARD SPECIFICATIONS.
6) FOG SEAL COAT: CONFORM TO SECTION 37, "BITUMINOUS SEALS", OF CALTRANS STANDARD SPECIFICATIONS.
7) CONCRETE: CLASS B. CONFORM TO SECTION 90, "PORTLAND CEMENT CONCRETE", OF CALTRANS STANDARD SPECIFICATIONS.
8) TRAFFIC STRIPES: CONFORM TO SECTION 84, "TRAFFIC STRIPES AND PAVEMENT MARKINGS", OF CALTRANS STANDARD SPECIFICATIONS.
9) ROCK RIPRAP: CONFORM TO SECTION 72, "SLOPE PROTECTION", OF CALTRANS STANDARD SPECIFICATIONS. USE NO. 2 BACKING. SECTION 86, "SIGNALS AND LIGHTING", OF CALTRANS STANDARD SPECIFICATIONS.
10) EXISTING ASPHALT CONCRETE SHALL BE REMOVED AND REPLACED IN ALL LOCATIONS WHERE A 3' MINIMUM BETWEEN SAWCUT AND LIP OF GUTTER OR SAWCUT TO SAWCUT CANNOT BE OBTAINED.

ELECTRIC UNDERGROUND CONSTRUCTION GENERAL NOTES

1. All trenching, backfilling, and installation of electric structures shall be in accordance with City of Ukiah Electric Department's current standard practices. The Contractor is to place transformer pads, conduits, vaults, pull boxes street light bases and standards, pull-in tape, and all associated material. Contractor shall provide concrete for transformer pads, street light bases, sweep reinforcement and other applications as required.
2. After payment of electric construction costs, the City of Ukiah Electric Department will install cable, transformers, street light standards and lights. The City shall make all necessary splices and connections.
3. It is the Contractor's responsibility to have the installations inspected and approved by a City of Ukiah Electric Utility Department project manager prior to backfilling. A minimum 24-hour notice is required.
4. It is the Contractor's responsibility to verify the precise location of all underground facilities prior to the start of construction. Call Underground Service Alert (USA) 48 hours in advance at 1-800-642-2444. A conduit shall not be deemed abandoned unless the owner utility has given written confirmation. The contractor must follow all USA laws.
5. If during construction the approved plans cannot be followed, the City of Ukiah Electric Utility Engineering Department Project Manager must approve any changes.
6. The Contractor is responsible for repairing or replacing all damage during construction to asphalt, concrete, curb, gutter, sidewalk, landscaping, retaining walls, etc., and restoring to original or better condition.
7. Trench backfill shall conform to City of Ukiah standard trench detail and compaction requirements. (Copies are available upon request.
8. The Contractor shall shore all trenches deeper than 5 feet. Shoring shall be in accordance with the Construction Safety Orders of the Division of Occupational Safety and Health.
9. **RESIDENTIAL SERVICE REQUIREMENTS**
   120/240, 120/208 Single Phase up to 200 Amp.
   Minimum Conduit Size - 3" Schedule 40 (2" Schedule 40 Conduit may be considered on a case by case scenario, with approval of Electric Department) with 24" Min. radius, Schedule 40 Elbows, 2/0 AL Triplex 600 V Cable. Conduit rising above ground shall be Schedule 80.
   NOTE: Maximum of three 90-degree Elbows per run or 270 degrees of bend.
   From 200 to 400A Service sizes, minimum conduit size 3", 4/0 AL TX.
10. **COMMERCIAL SERVICE REQUIREMENTS**
    120/240, 120/208, Single and Three Phase 480/277 Three Phase
    Minimum Conduit: Primary - 4" Sch 40 with 36" Min. radius, Sch 40 Elbows,. Secondary – Sch 40 per chart below, Any primary or secondary conduit rising above ground shall be Schedule 80

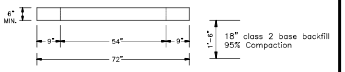
Commercial Service Size	Number of Conductors	Conductor size (KCML or AWG)	Number of Conduits	Elbows2
200A	4	4/0 AL 600V	1-3" SCH 40	3'-36" Min. SCH 80
400A	4	500 KCM AL 600V	1-4" SCH 40	4'-36" Min. SCH 80
600A	4	500 KCM AL 600V	2-4" SCH 40	4'-36" Min. SCH 80
800A	4	500 KCM AL 600V	3-4" SCH 40	4'-36" Min. SCH 80
1000A	4	500 KCM AL 600V	4-4" SCH 40	4'-36" Min. SCH 80
1200A	4	750 KCM AL 600V	4-5" SCH 40	5'-36" Min. SCH 80
1600A	4	750 KCM AL 600V	6-5" SCH 40	5'-36" Min. SCH 80
2000A	4	750 KCM AL 600V	8-5" SCH 40	5'-36" Min. SCH 80

NOTES:
1. Maximum of three 90-degree elbows or 270 degrees of bend per conduit run.
2. Inside of sweeps to be concrete reinforced
3. 24" elbows are acceptable in certain cases with approval of City of Ukiah.
4. All commercial services shall have a test block bypass per EUSERC specification.
5. All switchgear must be approved by UEU Metering and Technical Services Department. Contractor shall supply the technical drawings that include the EUSERC numbers for each cabinet of the proposed switchgear and panels. EUSERC does not allow source and load power (metered and un-metered) to comingle in the same space.

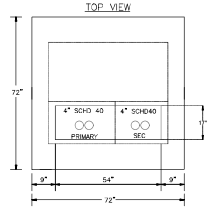
11. Street Light Conduit - 1" PVC Conduit Type DB-120 minimum. Bends and sweeps shall be 24" minimum radius. THHN wire required for streetlights.
12. Conduit pull tape shall be a minimum of 2500 lb. tensile strength and shall have footage markers.
13. All vertical 90 degree bends require bags of concrete placed on risers. 2 bags for 1-2 conduits. 6 bags for 3-4 conduits and 8 bags for 5-6 conduits. The amount of bags may be increased in field by PM, if required.

TRANSFORMER PAD DETAIL
SCALE: N.T.S.

FRONT VIEW



TOP VIEW



300 KVA 240 or 208 Y 3 PHASE

NOTES:
1. USE CLASS B CONCRETE WITH 6" X 6" WWM
2. USE CLASS 2 BASE UNDER PAD AS BACKFILL. COMPACT BASE TO 95% COMPACTION.

City of Ukiah
ELECTRIC UTILITY DEPARTMENT

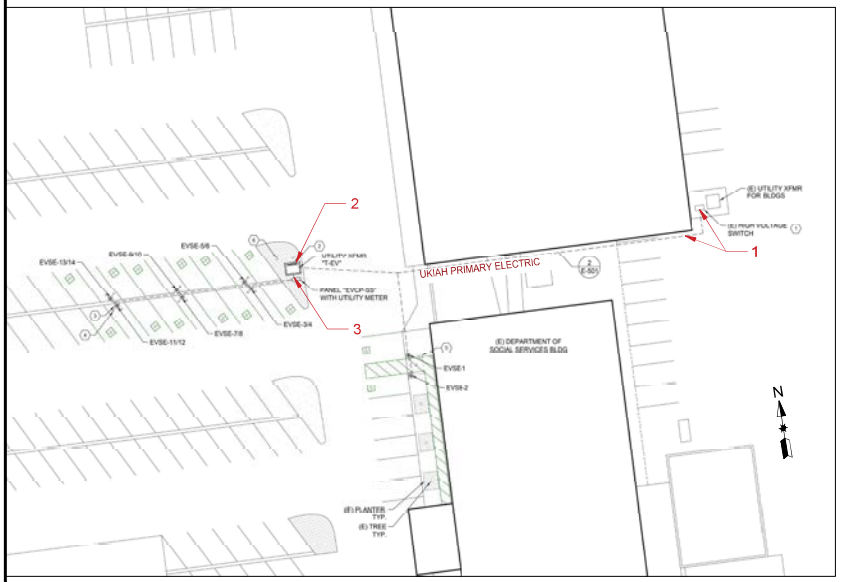
DATE	DESIGNED	DRAWN	CHECKED	APPROVED BY: AS BUILT	REVISION
3/19/2024	SB	SB			0

No.	REVISIONS	DATE	DSG. BY	BY	CKD	APPD

TITLE: JUVENILE HALL EV CHARGER LOCATION

W.O.	NUMBER
GRID	01
SCALE	N.T.S.
DWG. No.	0601
SHEET	2 of 2

YOKAYO CENTER STATE ST EV CHARGER



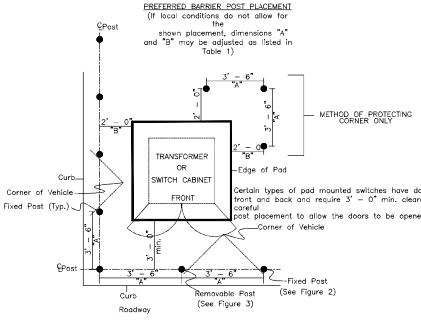
Contractor's Responsibility:

1. Locate existing City ofUkiah owned Pedestal
   - Contractor to install new conduit into the Pedestal with a Journeyman Lineman present.
   - Trench and install 1-4" SCHD 40 conduit from the (E)Pedestal location to the new 150 kVA transformer location.
   - Conduit to be stubbed up on the Primary side of the new transformer.
2. At the new transformer location, pour a new concrete pad for the new transformer, specifications on this page.
3. From the secondary side of the new transformer, trench and install 4-4" SCHD 40 conduits to the ne switchgear location.

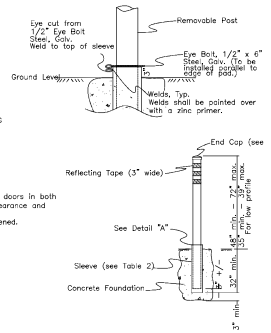
City of Ukiah Electric Utility to:

1. Standby while any and all work is done in or near energized equipment. Run and install all conductor from ped to transformer
2. Installation of the new 150 kVA 120/208y transformer, run and install all conductor from transformer to switchgear.
3. Do all connections necessary to make ready and energize.

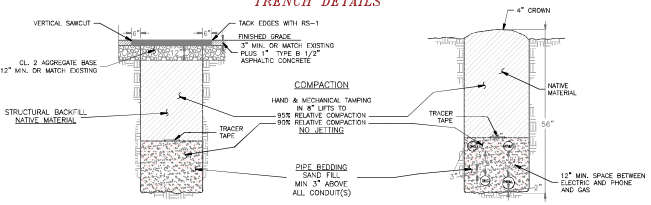
PREFERRED BARRIER POST PLACEMENT
(If local conditions do not allow for the shown placement, dimensions "A" and "B" may be adjusted as listed in Table 1)



EYE BOLT STOP AND LOCK DETAIL FOR REMOVABLE BARRIER



TRENCH DETAILS



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ELECTRIC UNDERGROUND CONSTRUCTION GENERAL NOTES

1. All trenching, backfilling, and installation of electric structures shall be in accordance with City of Ukiah Electric Department's current standard practices. The Contractor is to place transformer pads, conduits, vaults, pull boxes street light bases and standards, pull-in tape, and all associated material. Contractor shall provide concrete for transformer pads, street light bases, sweep reinforcement and other applications as required.
2. After payment of electric construction costs, the City of Ukiah Electric Department will install cable, transformers, street light standards and lights. The City shall make all necessary splices and connections.
3. It is the Contractor's responsibility to have the installations inspected and approved by a City of Ukiah Electric Utility Department project manager prior to backfilling. A minimum 24-hour notice is required.
4. It is the Contractor's responsibility to verify the precise location of all underground facilities prior to the start of construction. Call Underground Service Alert (USA) 48 hours in advance at 1-800-642-2444. A conduit shall not be deemed abandoned unless the owner utility has given written confirmation. The contractor must follow all USA laws.
5. If during construction the approved plans cannot be followed, the City of Ukiah Electric Utility Engineering Department Project Manager must approve any changes.
6. The Contractor is responsible for repairing or replacing all damage during construction to asphalt, concrete, curb, gutter, sidewalk, landscaping, retaining walls, etc., and restoring to original or better condition.
7. Trench backfill shall conform to City of Ukiah standard trench detail and compaction requirements. (Copies are available upon request.
8. The Contractor shall shore all trenches deeper than 5 feet. Shoring shall be in accordance with the Construction Safety Orders of the Division of Occupational Safety and Health.
9. **RESIDENTIAL SERVICE REQUIREMENTS**
   120/240, 120/208 Single Phase up to 200 Amp.
   Minimum Conduit Size - 3" Schedule 40 (2" Schedule 40 Conduit may be considered on a case by case scenario, with approval of Electric Department) with 24" Min. radius, Schedule 40 Elbows, 2/0 AL Triplex 600 V Cable. Conduit rising above ground shall be Schedule 80.
   NOTE: Maximum of three 90-degree Elbows per run or 270 degrees of bend.
   From 200 to 400A Service sizes, minimum conduit size 3", 4/0 AL TX.
10. **COMMERCIAL SERVICE REQUIREMENTS**
    120/240, 120/208, Single and Three Phase 480/277 Three Phase
    Minimum Conduit: Primary - 4" Sch 40 with 36" Min. radius, Sch 40 Elbows., Secondary – Sch 40 per chart below, Any primary or secondary conduit rising above ground shall be Schedule 80

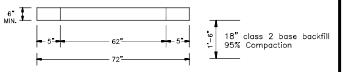
Commercial Service Size	Number of Conductors	Conductor size (KCML or AWG)	Number of Conduits	Elbows2
200A	4	4/0 AL 600V	1-3" SCH 40	3'-36" Min. SCH 80
400A	4	500 KCM AL 600V	1-4" SCH 40	4'-36" Min. SCH 80
600A	4	500 KCM AL 600V	2-4" SCH 40	4'-36" Min. SCH 80
800A	4	500 KCM AL 600V	3-4" SCH 40	4'-36" Min. SCH 80
1000A	4	500 KCM AL 600V	4-4" SCH 40	4'-36" Min. SCH 80
1200A	4	750 KCM AL 600V	4-5" SCH 40	5'-36" Min. SCH 80
1600A	4	750 KCM AL 600V	6-5" SCH 40	5'-36" Min. SCH 80
2000A	4	750 KCM AL 600V	8-5" SCH 40	5'-36" Min. SCH 80

NOTES:
1. Maximum of three 90-degree elbows or 270 degrees of bend per conduit run.
2. Inside of sweeps to be concrete reinforced
3. 24" elbows are acceptable in certain cases with approval of City of Ukiah.
4. All commercial services shall have a test block bypass per EUSERC specification.
5. All switchgear must be approved by UEU Metering and Technical Services Department. Contractor shall supply the technical drawings that include the EUSERC numbers for each cabinet of the proposed switchgear and panels. EUSERC does not allow source and load power (metered and un-metered) to comingle in the same space.

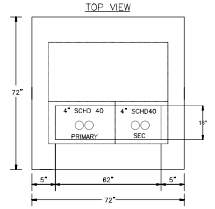
11. Street Light Conduit - 1" PVC Conduit Type DB-120 minimum. Bends and sweeps shall be 24" minimum radius. THHN wire required for streetlights.
12. Conduit pull tape shall be a minimum of 2500 lb. tensile strength and shall have footage markers.
13. All vertical 90 degree bends require bags of concrete placed on risers. 2 bags for 1-2 conduits. 6 bags for 3-4 conduits and 8 bags for 5-6 conduits. The amount of bags may be increased in field by PM, if required.

TRANSFORMER PAD DETAIL
SCALE: N.T.S.

FRONT VIEW



TOP VIEW



150 KVA or 208 Y 3 PHASE

NOTES:
1. CONDUIT SIZE AND TOTAL AMOUNT VARY PER PROJECT
2. USE CLASS 2 BASE UNDER PAD AS BACKFILL. COMPACT BASE TO 95% COMPACTION.

No.	REVISIONS	DATE	DSG. BY	BY	CKD	APPD

City of Ukiah
ELECTRIC UTILITY DEPARTMENT

DATE	DESIGNED	DRAWN	CHECKED	APPROVED BY: AS BUILT	REVISION
3/19/2024	SB	SB			0

TITLE:
STATE STREET EV CHARGER LOCATION

W.O.	NUMBER
GRID	01
SCALE	N.T.S.
DWG. No.	0601
SHEET	2 of 2

SECTION 00 02 00

NOTICE INVITING BIDS

Notice is hereby given that sealed bids will be received at the Mendocino County General Service Agency Office, 841 Low Gap Road, Ukiah, California 95482 until the hour of 2:00 p.m., as determined by the clock on the wall in the General Services Agency Office, on **February 19, 2025,** and then publicly opened and read aloud in the General Service Agency Conference Room, 841 Low Gap Road, Ukiah, California for the following project:

Electric Vehicle Charging Parking Stalls Project (BID 001-25)

Electronic Plans and Documents may be seen or downloaded from the Mendocino County Web Page for Open RFP, Quotes & Bids: https://www.mendocinocounty.org/departments/general-services/central-services/open-rfp-quotes-bids. Additionally plans and documents have been distributed to builder's exchange plan rooms throughout Northern California.

Bids shall be made on the form provided in this Manual and accompanied by a form of bid security as provided in Section 001000 Instructions to Bidders.

The successful Bidder will be required to furnish a Labor and Material Bond, and a Performance Bond as required in Section 001000 Instructions to Bidders.
Bidders' attention is called to Instruction to Bidders and other related documents in this Manual for full directions and information as to bidding and other requirements.

NON-MANDATORY PRE-BID CONFERENCE
A non-mandatory pre-bid conference and site inspection will be held on:

February 5, 2025, at 1:00 p.m. at 501 Low Gap Road, Ukiah, CA 95482
February 5, 2025, at 2:00 p.m. at 727 South State Street, Ukiah, CA 95482

PAYMENT OF PREVAILING WAGES
Pursuant to the provisions of the Labor Code of the State of California, the Department of Industrial Relations has made a determination of the rate of per diem wages to be paid on the prevailing rate of pay for regular, holiday and overtime work in the locality in which the public work is to be performed, for each craft, classification, or type of workman needed to execute the contract. All County of Mendocino projects greater than $1,000 require that contractors adhere to Prevailing Wage requirements (California Labor Code, Sections 1770 through 1775). The rates can be found online here: https://www.dir.ca.gov/OPRL/DPreWageDetermination.htm.

CONTRACTOR REGISTRATION
Per Labor Code Section 1771.1(a) A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5. It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

CERTIFIED PAYROLL RECORDS
Per Labor Code Section 1776 each contractor and subcontractor shall keep accurate payroll records. A certified copy of all payroll records for work performed under this contract shall be furnished upon request to a representative of the awarding body. Per SB 854 contractors and subcontractors are required to furnish certified payroll reports directly to the Department of Industrial Relations.

EMPLOYMENT OF APPRENTICES
Each contractor and subcontractor performing work in an apprenticeable craft or trade shall comply with Section 1777.5 relating to Apprentices on public works projects.

MENDOCINO COUNTY BUSINESS LICENSE
Pursuant to Mendocino County Code Chapter 6.04 – Business Licenses, at the time of contract award, the contractor shall supply a copy of their current County of Mendocino business license.

LAWS AND GOVERNANCES
In the performance of the work contemplated by this contract, the contractor shall conform to and abide by all labor requirements and provisions of State and Federal Laws and City and County Ordinances and Regulations which may in any manner affect those engaged or employed on the work project, including but not limited to the overtime provisions of the Labor Code section 1813 and 1815 of the State of California.

Federal Laws, including The Davis-Bacon Act and The Americans with Disabilities Act of 1990, are applicable to the project.

END OF SECTION

SECTION 00 10 00

INSTRUCTIONS TO BIDDERS

PART 1 – GENERAL

1.1 BIDS RECEIVED

A. Sealed bids for the **Electric Vehicle Charging Parking Stalls Project (BID 001-25)** will be received at the Mendocino County General Service Agency Office, 841 Low Gap Road, Ukiah, California, until 2:00 p.m. as determined by the clock on the wall of the General Service Agency Office, on **February 19, 2025**, and then publicly opened and read aloud in the General Service Agency Conference Room, 841 Low Gap Road, Ukiah, California.

B. Late bids will not be accepted. It is Bidder's responsibility to ensure that its bid is delivered and received at the location noted above on or before the date and hour set for the bid opening.

1.2 LICENSE REQUIREMENT

The license required for this Project is a California Contractor A General Engineering and/or a C-10 Electrical.

1.3 BIDS AND BID SECURITY

Bids, to be considered, must be in accordance with the following instructions:

A. Bids must be submitted on the bid form provided in this Manual, properly and completely filled out with numbers stated both in writing and in figures and with signatures of all persons signing in longhand/cursive.

B. The completed form shall be without erasures or interlineation and shall not contain recapitulations of the work to be done.

C. A Bidder’s Bond, Certified Check or Cashier's Check made payable to the County of Mendocino for an amount equal to at least ten percent (10%) of the bid amount shall accompany each bid. The above-mentioned bid security shall be given as a guarantee that the Bidder shall execute the contract if it be awarded to it in conformity with the contract documents and shall provide the surety bond or bonds required, sign the contract and commence work as set forth in the contract documents. Such guaranty to be forfeited should the Bidder to whom the contract is awarded fail to enter into the contract.

D. Responsive Bids shall include completed and executed copies of the following sections if included in the project Manual:

a. 001200 Qualification Application
b. 003070 Non-Collusion Affidavit
c. 003100 Bid Form
d. 004300 Subcontractor Listing Form

1.4 SUBCONTRACTORS LISTED

A. In accordance with California Public Contract Code Sections 4100 et seq., inclusive, each bidder shall provide a list of subcontractors (Section 00430), giving the name and location of place of business and contractor's license number of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent (0.5%) of the total contract price. In each instance, the nature and portion of the work to be subcontracted shall be described.

B. Failure of Bidder to specify a subcontractor for any portion of the work in an amount in excess of one-half of one percent (0.5%) of the total contract price constitutes an agreement for Bidder to perform that portion of the work itself. After bids are opened, no subcontractor may be designated or substituted except as provided for in Sections 4107 et seq. of the Public Contract Code.

C. All Bidders must supply with their Bids the required information on all subcontractors who will perform any portion of the work including labor, rendering of service or specially fabricating and installing a portion of the Work or improvement according to detailed drawings contained in the plans and specifications, in excess of one-half of one percent (0.5%) of total bid. Violation of this requirement may result in Bid being deemed non-responsive and not being considered.

1.5 AWARD OR REJECTION OF BIDS

The contract shall be awarded to the lowest responsible bidder complying with these instructions, provided the bid is deemed reasonable and in the best interest of the County of Mendocino. The County reserves the right to reject any and all bids, and to waive any informality on bids received whenever the rejection or waiver is in the best interest of the County. The competency and dependability of the bidders will be considered when making the award.

A. Additive and Deductive Items: Method of Determining Lowest Bid. Pursuant to Public Contract Code section 20103.8, if this bid solicitation includes additive and/or deductive items, the checked [X] method shall be used to determine the lowest bid: [check one].

[X] 1. The lowest bid shall be the lowest bid price on the total base bid contract without consideration of the prices on allowance, additive or deductive items.

2. The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items that were specifically identified in the bid solicitation or Bid Form as being used for the purpose of determining the lowest bid price.

3. The lowest bid shall be the lowest total of the bid prices on the base contract and those additive or deductive items taken in order from a specifically identified list of those items that, when in the solicitation, and added to, or subtracted from, the base contract, are less than, or equal to, a funding amount publicly disclosed by the County before the first bid is opened.

4. The lowest bid shall be determined in a manner that prevents any information that would identify any of the bidders or the proposed Subcontractors or suppliers from being revealed to the public entity before the ranking of all bidders from lowest to highest has been determined.

If no method is checked, sub-paragraph 1. shall be used to determine the lowest bid.

B. Notwithstanding the method used by the County to determine the lowest responsible bidder, the County retains the right to add to or deduct from the contract any of the additive or deductive items included in the bid solicitation.

C. The award of the contract, if awarded, is expected to be made within thirty (30) days and in no event any later than eighty (80) days after the bid opening. After the award, County shall notify the successful Bidder in writing, and forward with the notification original contracts for Bidder's execution. Within eight (8) working days after such notification, the successful Bidder shall return the signed contracts to County, accompanied by all required Surety Bonds, insurance policies and endorsements.

1.6 TIME OF COMPLETION

Bidder agrees to commence work on or before a date to be specified in the written "Notice to Proceed" from County and to fully complete the project within one hundred twenty (120) calendar days from date of the written "Notice to Proceed".

1.7 ADDENDUM

Any addendum issued during the time of bidding and before bid opening shall be included in the bid. The addendum issued by the County shall become part of the agreement. Questions to be considered for inclusion in an addendum must be in writing and in the hands of County not less than seven (7) days prior to bid opening date.

1.8 INTERPRETATION OF DRAWINGS AND DOCUMENTS

Should a Bidder find discrepancies in, or omissions from, the drawings or documents, or should it be in doubt as to their intent, it should at once notify County, which will then send responsive written instructions in the form of addenda to all Bidders. The county will not be responsible for any oral instructions. Any verbal conversations with County during the bidding period are not to be construed as instructions. Any changes in the Contract documents will be issued by written addendum only.

1.9 WITHDRAWAL OF BID

Bids may be withdrawn prior to, but not later than, the time of the bid opening.

1.10 BONDS

Successful Bidder is required to furnish a Labor and Material Payment Bond and a Performance Bond each in the amount equal to one hundred percent (100%) of the contract price. Said Bonds shall be obtained from a surety company satisfactory to County and the Bonds shall be submitted on the bond forms provided in section 00 61 13.

1.11 SUBSTITUTIONS

Any substitution shall be made in accordance with instructions contained in Section 007000 – General Conditions included herein. Questions concerning substitutions will not be entertained during the bidding period.

1.12 SUBSTITUTION OF SECURITY

Pursuant to California Public Contract Code Section 22300, the Contractor may substitute securities for retention money withheld by the County to insure performance under the Contract. Said securities shall be in a form and of a type acceptable to the County.

1.13 LIQUIDATED DAMAGES

In case of failure on the part of Contractor to complete the work within the time stipulated plus any duly authorized extension of time granted in writing by County, Contractor shall pay to County the sum of $250.00 per calendar day for each day's delay beyond the time prescribed as liquidated damages, but not as a penalty. The language in the paragraph of the General Conditions entitled "Time of Completion and Liquidated Damages" is incorporated herein.

1.14 BIDDER'S QUALIFICATIONS

A. All Bidders, Contractors and Subcontractors bidding under joint venture agreements shall be duly licensed as provided for under Sections 7000 et seq. of the Business and Professions Code.

B. A corporation which is awarded the Contract will be required to furnish certification attesting to its corporate existence, as well as evidence that the Officer signing the contract is duly authorized to do so.

C. Bidders and their subcontractors may be required to furnish evidence satisfactory to County that they have sufficient means and have had experience in the class of work called for to enable them to complete the contract in a satisfactory manner.

D. No person, firm or corporation shall make or file or be interested in more than one bid for the same work, except insofar as alternate bids may be called for. No person, firm or corporation shall submit a collusive or sham bid or seek directly or indirectly to induce any other bidder to submit a collusive or sham bid or to refrain from submitting a bid or to seek in any way to control or fix the price of the bid or any portion of the bid price in order to secure an advantage against County or any other person interested in the proposed contract. However, a person, firm or corporation submitting a sub-proposal to a bidder or quoting prices on materials to a bidder is not hereby disqualified from submitting sub-proposals or quoting prices to other bidders.

E. A licensed contractor shall not submit a bid to a public agency unless (1) its contractor's license number appears clearly on the bid, (2) the license expiration date is stated, and (3) the bid contains a statement that the representations made therein are made under penalty of perjury. Any bid not containing this information, or a bid containing information which has subsequently proven false, shall be considered non-responsive and shall be rejected by County.

F. The work to be performed under this contract is of a very specialized nature. It is the desire of the County to secure the best work attainable and to maintain a very critical and condensed schedule. Bidders considered for the award will be limited to those firms who can show to the satisfaction of County that they have the facilities and experience necessary to perform the required construction in accordance with specifications proposed for this project. The terms under which bidders will be evaluated and the rules that will be applied are attached to this Manual as section 00120 Qualification Application.

1.15 EXAMINATION OF SITE AND DOCUMENTS

By submitting a bid, Bidder agrees and warrants that (1) it has examined the site and all documents, drawings and specifications; (2) it is satisfied that the same are adequate to produce the required results; and (3) its bid covers the cost of all items required in the agreement. The work to be performed includes all of the items mentioned in these specifications and/or as shown on the plans and other documents included as a part of the project.

1.16 ENVIRONMENTAL AND PLANNING CONDITIONS OF APPROVAL

Bidder agrees to perform its work in conformance with all environmental and planning conditions of approval applicable to the project. Bidders' attention is directed to specification section 008010 Supplementary General Conditions and the source documents for specific conditions of approval

1.17 AGREEMENT

Contract documents include the Agreement which the successful Bidder, as Contractor, will be required to execute.

1.18 PRE-CONSTRUCTION CONFERENCE

The successful bidder shall be available for a pre-construction conference with County at a mutually convenient time.

END OF SECTION

SECTION 00 12 00

QUALIFICATION APPLICATION

The information contained in this Application is confidential and is for the sole use of County in evaluating the qualifications of Bidder. Only the information below ("Contact Information") is considered public information.

CONTACT INFORMATION

Firm Name (as it appears on license): FERRANTI CONST INC.

Check one: ☒ Corporation ☐ Partnership ☐ Sole Proprietor

Contact Person: Don Ferranti Jr

Address: P.O. Box 259 Redwood Valley Ca 95470

Phone: 707-485-0095 Fax: 707-485-0918

If the firm is a sole proprietor or partnership:

Owner(s) of Company: _____

Contractor's License Number(s):

License No.	Classifications	Expiration	Qualifying Individual
385543	A-B-C8	3/31/2027	DON FERRANTI

DIR Registration Number: 1000000384

Mendocino County Business License No: 127527

PART I. ESSENTIAL REQUIREMENTS FOR QUALIFICATION

The Contractor will be immediately disqualified if the answer to any of questions 1 through 3 is "no".

The Contractor will be immediately disqualified if the answer to any of questions 4 through 7 is "yes"[1].

1. Contractor possesses a valid and current California Contractor's license for the project or projects for which it intends to submit a bid.
☐ Yes ☐ No

2. Contractor has a liability insurance policy with a policy limit of at least one million dollars ($1,000,000) per occurrence and two million dollars ($2,000,000) aggregate.
☐ Yes ☐ No

3. Contractor has a current workers' compensation insurance policy as required by the Labor Code or is legally self-insured pursuant to Labor Code Section 3700 *et seq.*
☐ Yes ☐ No ☐ Contractor is exempt from this requirement because it has no employees

4. Has Contractor's license been revoked at any time in the last five (5) years?
☐ Yes ☐ No

5. Has a surety firm completed a contract on Contractor's behalf, or paid for completion because Contractor's firm was default terminated by the project owner within the last five (5) years?
☐ Yes ☐ No

6. At the time of submitting this qualification form, is Contractor's firm ineligible to bid on or be awarded a public works contract, or perform as a subcontractor on a public works contract, pursuant to either Labor Code Section 1777.1 or Labor Code Section 1777.7?
☐ Yes ☐ No

   If the answer is "yes", state the beginning and ending dates of the period of debarment:

7. At any time during the last five (5) years, has Contractor's firm, or any of its owners or officers, been convicted of a crime involving the awarding of a contract of a government construction project, or the bidding or performance of a government contract?
☐ Yes ☐ No

[1] A contractor disqualified solely because of a "yes" answer given to questions 4,5, or 7 may appeal the disqualification and provide an explanation of the relevant circumstances during the appeal procedure.

PART II. ORGANIZATION, HISTORY, ORGANIZATIONAL PERFORMANCE, COMPLIANCE WITH CIVIL AND CRIMINAL LAWS

A. Current Organization and Structure of the Business

For firms that are corporations:

1a. Date incorporated: _____
1b. Under the laws of the State of: _____
1c. Provide all the following information for each person who is either (a) an officer of the corporation (president, vice president, secretary, treasurer), or (b) the owner of at least ten percent (10%) of the corporation's stock:

Name	Position	Years with Co.	% Ownership	Social Security #

For firms that are partnerships:

1a. Date of formation: _____
1b. Under the laws of the State of: _____
1c. Provide all of the following information for each partner who owns ten percent (10%) or more of the firm:

Name	Position	Years with Co.	% Ownership	Social Security #

For firms that are sole proprietorships:

1a. Date of commencement of business: _____
1b. Social security number of company owner: _____

B. History of the Business and Organizational Performance

2. Has there been any change in ownership of the firm at any time during the last three (3) years?

NOTE: A corporation whose shares are publicly traded is not required to answer this question.
☐ Yes ☐ No

If “yes”, explain on a separate signed page.

3. Is the firm a subsidiary, parent, holding company, or affiliate of another construction firm?
NOTE: Include information about other firms if one firm owns fifty percent (50%) or more of another, or if an owner, partner, or officer of Contractor’s firm holds a similar position in another firm.
☐ Yes ☐ No

If “yes”, explain on a separate signed page.

4. Are any corporate officers, partners, or owners connected to any other construction firms?
NOTE: Include information about other firms if an owner, partner, or officer of Contractor’s firm holds a similar position in another firm.
☐ Yes ☐ No

If “yes”, explain on a separate signed page.

5. Financial Statements: Does the Contractor have reviewed or audited financial statements for each of the last three years?
☐ Yes ☐ No

6. State Contractor’s firm’s gross revenues for each of the last three (3) years:

Year	Gross Revenue

7. How many years has Contractor’s organization been in business in California as a contractor under its present business name and license number? _____ years.

8. Is Contractor’s firm currently the debtor in a bankruptcy case?
☐ Yes ☐ No

If “yes”, please attach a copy of the bankruptcy petition, showing the case number, and the date on which the petition was filed.

Disputes

9. At any time in the last five (5) years, has Contractor’s firm been assessed and paid liquidated damages after completion of a project under a construction contract with either a public or private owner?
☐ Yes ☐ No

If “yes”, explain on a separate signed page, identifying all such projects by owner, owner’s address, the date of completion of the project, amount of liquidated damages assessed, and all other information necessary to fully explain the assessment of liquidated damages.

10. In the last five (5) years, has Contractor’s firm, or any firm with which any of Contractor’s company’s owners, officers or partners was associated, been debarred, disqualified, removed or otherwise prevented from bidding on, or completing, any government agency or public works project for any reason?
NOTE: “Associated with” refers to another construction firm in which an owner, partner or officer of Contractor’s firm held a similar position.
☐ Yes ☐ No

If “yes”, explain on a separate signed page. State whether the firm involved was the firm applying for qualification here or another firm. Identify by name of the company, the name of the person within Contractor’s firm who was associated with that company, the year of the event, the owner of the project, the project, and the basis for the action.

11. In the last five (5) years, has Contractor’s firm been denied an award of a public works contract based on a finding by a public agency that Contractor’s company was not a responsible bidder?
☐ Yes ☐ No

If “yes”, explain on a separate signed page. Identify the year of the event, the owner, the project, and the basis for the finding by the public agency.

NOTE: The following two questions refer only to disputes between Contractor’s firm and the owner of a project. Contractors need not include information about disputes between its firm and a supplier, another contractor, or subcontractor. Contractor need not include information about “pass-through” disputes in which the actual dispute is between a subcontractor and a project owner. Also, Contractor may omit reference to all disputes about amounts less than $50,000.

12. In the last five (5) years, has any claim *against* Contractor’s firm concerning the firm’s work on a construction project been *filed in court or arbitration*?
☐ Yes ☐ No

If “yes”, on separate signed sheets of paper identify the claim(s) by providing the project name, date of the claim, name of the claimant, a brief description of the nature of the claim, the court in which the case was filed, and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution).

13. In the last five (5) years, has Contractor’s firm made any claim against a project owner concerning work on a project or payment for a contract and *filed that claim in court or arbitration*?
☐ Yes ☐ No

If “yes”, on separate signed sheets of paper identify the claim by providing the project name, date of the claim, name of the entity (or entities) against whom the claim was filed, a brief description of the nature of the claim, the court in which the case was filed, and a brief description of the status of the claim (pending or, if resolved, a brief description of the resolution).

Criminal Matters and Related Civil Suits

14. Has Contractor’s firm or any of its owners, officers or partners ever been found liable in a civil suit or found guilty in a criminal action for making any false claim or material misrepresentation to any public agency or entity?
☐ Yes ☐ No

If “yes”, explain on a separate signed page, including who was involved, the name of the public agency, the date of the investigation and the grounds for the finding.

15. Has Contractor’s firm or any of its owners, officers or partners ever been convicted of a crime involving federal, state, or local law related to construction?
☐ Yes ☐ No

If “yes”, explain on a separate signed page, including who was involved, the name of the public agency, the date of the conviction and the grounds for the conviction.

16. Has Contractor’s firm or any of its owners, officers or partners ever been convicted of a federal or state crime of fraud, theft, or any other act of dishonesty?
☐ Yes ☐ No

If “yes”, identify on a separate signed page the person(s) convicted, the court (the county if a state court, the district or location if a federal court), the year, and the criminal conduct.

Bonding

17. If Issued a Notice of Award, can the contractor secure payment and performance bonds within ten (10) calendar days?
☐ Yes ☐ No

Name of Bonding Company:

_____

Name, Address, Telephone# for Surety Agent:

_____

_____

C. Compliance with Occupational Safety and Health Laws and with Other Labor Legislation Safety

18. Has Cal-OSHA cited and assessed penalties against Contractor's firm for any "serious", "willful", or "repeat" violations of its safety or health regulations in the last five (5) years?
NOTE: If Contractor has filed an appeal of a citation, and the Occupational Safety and Health Appeals Board has not yet ruled on your appeal, Contractor need not include information about it.
☐ Yes ☐ No

If "yes", attach a separate signed page describing the citations, including information about the dates of the citations, the nature of the violation, the project on which the citation(s) was/were issued, and the amount of the penalty paid (if any). If the citation was appealed to the Occupational Safety and Health Appeals Board and a decision has been issued, state the case number and the date of the decision.

19. Has the Federal Occupational Safety and Health Administration cited and assessed penalties against Contractor's firm in the last five (5) years?
NOTE: If Contractor has filed an appeal of a citation and the Appeals Board has not yet ruled on the appeal, or if there is a court appeal pending, Contractor need not include information about the citation.
☐ Yes ☐ No

If "yes", attach a separate signed page describing each citation.

20. Has the EPA or any Air Quality Management District or any Regional Water Quality Control Board cited and assessed penalties against either Contractor's firm or the owner of a project contracted to Contractor in the last five (5) years?
NOTE: If Contractor has filed an appeal of a citation and the Appeals Board has not yet ruled on the appeal, or if there is a court appeal pending, Contractor need not include information about the citation.
☐ Yes ☐ No

If "yes", attach a separate signed page describing each citation.

21. How often does Contractor require documented safety meetings to be held for construction employees and field supervisors during the course of a project?

22. List Contractor's Experience Modification Rate (EMR) (California's Workers' Compensation insurance) for each of the past three (3) premium years:
NOTE: An Experience Modification Rate is issued to Contractor annually by its workers' compensation insurance carrier.

Current year: _____

Previous year: _____

Year previous to previous year: _____

If Contractor's EMR for any of these three (3) years is or was 1.20 or higher, Contractor may, at its discretion, attach a letter of explanation.

Prevailing Wage and Apprenticeship Compliance Record

23. Provide the name, address and telephone number of the apprenticeship program (approved by the California Apprenticeship Council) from whom the Contractor intends to request the dispatch of apprentices to Contractor for use on any public work project for which it is awarded a contract by the County of Mendocino:

_____

_____

_____

SECTION 00 30 60

ANTITRUST CLAIM ASSIGNMENT

Pursuant to California Labor Code Section 7103.5, the following certification is hereby set forth and made a part of these specifications:

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the contractor or subcontractor offers and agrees to assign to the awarding body all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the contractor, without further acknowledgment by the parties.

SECTION 00 30 70

NON-COLLUSION AFFIDAVIT

In accordance with California Public Contract Code Section 7106, the following affidavit must be completed by the Bidder:

Non-Collusion Affidavit to be executed by Bidder
and submitted with bid

State of California
County of Mendocino

DONALD FERRANTI JR, being first duly sworn, deposes and says that he or she is Vice President of FERRANTI CONST INC, the party making the foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Signature

Please see attached Notary Certificate

CALIFORNIA JURAT

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this cerificate is attached, and not the truthfulness, accuracy, or validity of that document.

JURAT

State of California

County of Mendocino

Subscribed and sworn to (or affirmed) before me on

18th day of February, 20 25

by Donald Ray Faekanti Jr.

who proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

JER-1 D. MENDEZ COMM. #2434415 NOTARY PUBLIC - CALIFORNIA MENDOCINO COUNTY My Comm. Expires Jan. 15, 2027 JER-1

Notary Public

THIS CERTIFICATE MUST BE ATTACHED TO THE DOCUMENT DESCRIBED BELOW:

DATE OF DOCUMENT 2/18/25 TITLE OR TYPE OF DOCUMENT

Non-Collusion Affidavit

SECTION 00 31 00

BID FORM

Date Received 3/13/25
Date Opened 3/13/25
Initials

Electric Vehicle Charging Parking Stalls Project
FOR MENDOCINO COUNTY

TO: Honorable Board of Supervisors

It is understood that this bid is based upon completion of the work within the time of completion requirements contained in the Instructions to Bidders.

It is agreed that this bid may not be withdrawn for a period of eighty (80) days from the opening hereof.

The undersigned has carefully checked all its figures and understands that the County will not be responsible for any error or omissions on the part of the undersigned in making up this bid.

If awarded the Contract, the undersigned agrees to complete the Work, one hundred twenty (120) calendar days from the date of Notice to Proceed.

The undersigned, having become completely familiar with all conditions affecting the cost of the work at the place where the work is to be done, and with the drawings, specifications and other contract documents prepared and issued thereof and now on file at the General Services Agency Office, hereby proposes and agrees to perform everything required to be performed, and to provide and furnish any and all required labor, materials, equipment, transportation and services necessary to erect and complete in the best workmanlike manner, all as shown and specified.

The following bid amounts are as defined and clarified in the Bids Required portion of these specifications:

BASE BID:

501 Low Gap Road Bid Amount — Dollars ($247,240.20)

727 S Main Street Bid Amount — Dollars ($299,736.65)

TOTAL BASE BID:

Five Hundred forty Six Thousand Nine Hundred Seventy Six & 85/100 — Dollars ($546,976.85)

Allowance: Unforeseen Conditions

Twenty Thousand Dollars — Dollars ($20,000.00)

Name of Bidder DON FERRANTI JR

SALES TAX

All bids shall include the required California State Sales Tax, cost of all bonds and insurance as required and all other items of expense incidental to the contract. The County of Mendocino is exempt from Federal Excise Tax.

A licensed Contractor shall not submit a bid to a public agency unless its Contractor's License number appears clearly on the bid, the license expiration date is stated, and the bid contains a statement that the representations made therein are made under penalty of perjury. Any bid not containing this information, or a bid containing information which is subsequently proven false, shall be considered nonresponsive and shall be rejected by the public agency.

Name of Organization FERRANTI CONST INC

Type of Organization Corporation
(Corporation, Partnership, etc.)

Address P.O. Box 259 Redwood Valley Ca. 95470

Name of State where incorporated Ca.

CONTRACTORS LICENSE NO. 385543 EXPIRATION DATE 3/31/2027

☒ **Contractor has registered with the State of California's DIR (Department of Industrial Relations) website.**

☒ **DIR Registration #:** 1000003866

☒ **Contractor is currently licensed to do business in the County of Mendocino.**
Mendocino County Business License #: 127527

ADDENDA: CONTRACTOR TO ACKNOWLEDGE RECEIPT

I have received the following Addenda pertaining to this project and they have been included as part of my bid.

Numbers: 1+2

The undersigned hereby certifies under penalty of perjury that this bid is genuine and not collusive, that all the information is correct and that he/she has carefully checked all of the above figures and understands that the County will not be responsible for any errors or omissions on the part of the undersigned on making up this bid.

Signature [signature]

SECTION 00 43 00 S

UBCONTRACTORS LISTING FORM

Electric Vehicle CHARGING PARKING STALLS PROJECT

In accordance with the provisions of Section 4100 *et seq.* of the Public Contract Code of the State of California, each bidder shall list below the name, license number, Department of Industrial Relations (DIR) Registration Number, and location of place of business of each subcontractor who will perform a portion of the contract work in an amount in excess of one-half of one percent (0.5%) of the total contract price. In each such instance, the nature and portion of the work to be subcontracted shall be described.

PORTION OF WORK	SUBCONTRACTOR'S NAME	CONTRACT LIC. DIR REG #	LOCATION
Electrical	Bush Electric	1000128295	1481 Stutzenne Dr. Ukiah Ca 95482
Striping	Mendocino striping	1000699239	1875 Daniel Way Redwood Valley Ca 95470

TOKIO MARINE HCC

Surety Group
801 S Figueroa Street, Suite 700
Los Angeles, CA 90017 USA
Tel: 310-649-0990

Bond Number: BB202 4831

BID BOND

KNOW ALL PERSONS BY THESE PRESENTS:

That we, Ferranti Construction Inc. (hereinafter called Principal), as Principal, and American Contractors Indemnity Company, a corporation organized and existing under the laws of California, (hereinafter called Surety) as Surety, are held and firmly bound unto County of Me nocino (hereinafter called Obligee) as Obligee, in the penal sum of Ten percent (10 %) of amount bid not to exceed Fifty Three Thousand & 00/100 Dollars ($ 53,000.00) for the payment of which the Principal and the Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, That, whereas the Principal has submitted or is about to submit a proposal to the Obligee on a contract for Electric Vehicle Charging Parking Stalls Project

NOW, THEREFORE, if the said contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the contract in writing, then this obligation shall be void. If the Principal shall fail to do so, then the undersigned shall pay the obligee the damages which the obligee may suffer by reason of such failure up to and not exceeding the penal sum of the bond.

Signed and sealed this 24th day of February, 2025.

Principal: Ferranti Construction Inc.

By: _____

Surety: American Contractors Indemnity Company

By: _____
Cindy Beth
Attorney-In-Fact

Any claims under this bond may be addressed to the Surety at the following address:

American Contractors Indemnity Company
801 South Figueroa Street, Suite 700
Los Angeles, CA 90017
Attention: Nhung H. Saephan
Tel: (310) 649-0990
E-mail: NNguyen@tmhcc.com

TOKIO MARINE
HCC

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS:

That American Contractors Indemnity Company of the State of California, a California corporation, does hereby appoint,

CINDY BETH

its true and lawful Attorney-in-Fact, with full authority to execute on its behalf bond number BB2024831, issued in the course of its business and to bind the Company thereby, in an amount not to exceed Three million and 00/100 ($3,000,000.00).

This Power of Attorney is granted and is signed and sealed by facsimile under and by the authority of the following resolutions adopted by the Board of Directors of AMERICAN CONTRACTORS INDEMNITY COMPANY at a meeting duly called and held on the 1st day of September, 2011.

"Be it Resolved, that the President, any Vice-President, any Assistant Vice-President, any Secretary or any Assistant Secretary shall be and is hereby vested with full power and authority to appoint any one or more suitable persons as Attorney(s)-in-Fact to represent and act for and on behalf of the Company subject to the following provisions:

Attorney-in-Fact may be given full power and authority for and in the name of and on behalf of the Company, to execute, acknowledge and deliver, any and all bonds, recognizances, contracts, agreements or indemnity and other conditional or obligatory undertakings, including any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts, and any and all notices and documents canceling or terminating the Company's liability thereunder, and any such instruments so executed by any such Attorney-in-Fact shall be binding upon the Company as if signed by the President and sealed and effected by the Corporate Secretary.

Be it Resolved, that the signature of any authorized officer and seal of the Company heretofore or hereafter affixed to any power of attorney or any certificate relating thereto by facsimile, and any power of attorney or certificate bearing facsimile signature or facsimile seal shall be valid and binding upon the Company with respect to any bond or undertaking to which it is attached."

The Attorney-in-Fact named above may be an agent or a broker of the Company. The granting of this Power of Attorney is specific to this bond and does not indicate whether the Attorney-in-Fact is or is not an appointed agent of the Company.

IN WITNESS WHEREOF, American Contractors Indemnity Company has caused its seal to be affixed hereto and executed by its President on this 20th day of November, 2024.

AMERICAN CONTRACTORS INDEMNITY COMPANY

By: _____
Adam S. Pessin, President

A Notary Public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Los Angeles

On this 20th day of November, 2024, before me, D. Littlefield, a notary public, personally appeared Adam S. Pessin, President of American Contractors Indemnity Company, who proved to me on the basis of satisfactory evidence, to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of CALIFORNIA that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____ (seal)

D. LITTLEFIELD
Notary Public - California
Los Angeles County
Commission # 2478570
My Comm. Expires Jan 31, 2028

I, Kio Lo, Assistant Secretary of American Contractors Indemnity Company, do hereby certify that the Power of Attorney and the resolution adopted by the Board of Directors of said Company as set forth above, are true and correct transcripts thereof and that neither the said Power of Attorney nor the resolution have been revoked and they are now in full force and effect.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seals of said Companies at Los Angeles, California this 24th day of February, 2025.

Bond No. BB2024831
Agency No. 2168

Kio Lo, Assistant Secretary

CALIFORNIA ACKNOWLEDGMENT CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Sonoma }

On 2/24/25 before me, James Schieffer, Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Cindy Beth.
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

JAMES SCHIEFFER
COMM. #2468221
NOTARY PUBLIC - CALIFORNIA
SONOMA COUNTY
My Comm. Expires Nov. 6 2027

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature James Schieffer
Signature of Notary Public

Place Notary Seal and/or Stamp Above

OPTIONAL

Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____	Signer's Name: _____
☐ Corporate Officer – Title(s): _____	☐ Corporate Officer – Title(s): _____
☐ Partner – ☐ Limited ☐ General	☐ Partner – ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact	☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator	☐ Trustee ☐ Guardian or Conservator
☐ Other: _____	☐ Other: _____
Signer is Representing: _____	Signer is Representing: _____

SECTION 00 50 10

WORKERS' COMPENSATION CERTIFICATION

Pursuant to California Labor Code Section 1861, the Contractor hereby certifies the following:

I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract.

Dated:_____

Contractor Signature_____

SECTION 00 51 00 CONTRACTOR GUARANTEE

Electric Vehicle Charging Parking Stalls Project

The contractor hereby guarantees that the labor and material furnished for this project is in accordance with the drawings, specifications, and applicable building codes. Contractor agrees to repair or replace any or all of the work, together with any other adjacent work which may be displaced in so doing, that may prove to be defective in its workmanship or material within a period of ONE (1) YEAR from date of acceptance of the above-named project by County without any expense whatsoever to County, ordinary wear and tear and unusual abuse or neglect excepted.

In the event of Contractor's failure to comply with the above-mentioned conditions within fifteen (15) calendar days after being notified in writing by County, Contractor authorizes County to proceed to have said defects repaired and made good at Contractor's expense. Contractor shall honor and pay the costs and charges therefore upon demand.

SIGNED_____

COUNTERSIGNED_____

CONTRACTOR_____

DATED_____

DATE OF BUILDING ACCEPTANCE_____

SECTION 00 61 13
BOND FORMS

MENDOCINO COUNTY
PERFORMANCE BOND

KNOW ALL PERSONS BY THESE PRESENTS THAT WE, _____
whose address is _____ as Principal, and _____, duly authorized under the laws of the State of California to become sole surety on bonds and undertakings, as Surety, are jointly and severally held and firmly bound unto MENDOCINO COUNTY, a political subdivision of the State of California, as Obligee, in the full and just sum of _____ **AND 00/100 DOLLARS** lawful money of the United States of America, to be paid to the said Obligee, successors or assigns; for which payment, well and truly to be made, we bind ourselves, our heirs, executors, successors, administrators and assigns, jointly and severally, firmly by these presents.

THE CONDITION of the foregoing obligation is such that whereas, the above bounden Principal has entered into a contract, or is about to enter into a contract with the Obligee to do and perform the following work, to-wit: **Electric Vehicle Charging Parking Stalls Project** as is more specifically set forth in said contract, to which contract reference is hereby made.

NOW, THEREFORE, if the said Principal shall well and truly do the said work, and fulfill each and every of the covenants, conditions and requirements of the said contract in accordance with the plans and specifications, then the above obligation shall be null and void, otherwise is shall remain in full force and effect.

THE SURETY does hereby consent to any and all alterations, modifications and revisions to the agreement secured by this bond including but not limited to, any extension of time for performance or modifications in manner of performance which may be agreed upon and between MENDOCINO COUNTY as Obligee and the Principal, and the Surety does hereby waive notice of any alterations, modifications, revisions, or extensions.

SEALED with our seals and dated this ____ day of _____**,** 2025.

Principal (contractor)	Surety
By: _____	By: _____, Attorney in Fact
By: _____	

Signatures for Principal and Surety must be acknowledged before Notary Public

MENDOCINO COUNTY
PAYMENT BOND

KNOW ALL PERSONS BY THESE PRESENTS THAT WE _____

_____, as Principal, and _____
duly authorized under the laws of the State of California to become sole surety on bonds and undertakings, as Surety, are held and firmly bound unto any and all materialmen, persons, companies or corporations furnishing materials, provisions, provender or other supplies used in, upon, for or about the performance of the work contracted to be executed or performed under the contract
hereinafter mentioned, and all persons, companies or corporations renting or hiring teams, or implements or machinery, for or contributing to said work to be done, and all persons who performed work or labor upon the same, and whose claim has not been paid by the contractor, company or corporation, in the just and full sum of
_____ **AND 00/100 DOLLARS**

for the payment whereof, well and truly to be made, said Principal and Surety bind themselves, their heirs, administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION of the foregoing obligation is such that; whereas the above bounden principal has entered into a contract, or is about to enter into a contract with MENDOCINO COUNTY, a political subdivision of the State of California, to do and perform the following work, to-wit: **Electric Vehicle Charging Parking Stalls Project.**

NOW THEREFORE, if the above bounden Principal, contractor, person, company or corporation, or his or its subcontractor fails to pay for any materials, provisions, provender, other supplies, or terms used in, upon for or about the performance of the work contracted to be done, or for any work or labor done thereon of any kind, or for amounts due under the Unemployment Insurance Act with respect to such work or labor, or for any amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or the subcontractors of the Principal pursuant to Section 13020 of the Unemployment Insurance Code with respect to the work and labor, then the Surety of this bond will pay the same, in an amount not exceeding the sum specified in this bond as well as a reasonable attorney's fee, which shall be fixed and awarded by the court to the prevailing party in said suit, said attorney's fee to be taxed as costs in said suit and to be included in the judgment therein rendered.

THE SURETY does hereby consent to any and all alterations, modifications and revisions to the contract above referred to, and work and labor under which is secured by this bond, including but not limited to, any extension of time for performance or modifications in manner of performance which may be agreed upon by and between MENDOCINO COUNTY and the Principal, and the Surety does hereby waive notice of any alterations, modifications, revisions, or extensions.

THIS BOND is executed and filed to comply with the provisions of the act of Legislature of the State of California as designated in Civil Code 9550 et seq., inclusive, and all amendments thereto and shall inure to the benefit of any of the persons named in Civil Code section 9100 so as to give a right of action to those person or their assigns in any suit brought upon the bond.

SEALED with our seals and dated this____day of_____, 2025.

Principal (contractor)	Surety
By:	By:
	Attorney in Fact
By: _____	

Signatures for Principal and Surety must be acknowledged before Notary Public

END OF SECTION 00 61 13

SECTION 00 70 00

GENERAL CONDITIONS

1. DEFINITIONS

Whenever in the Specifications and other Contract Documents the following abbreviations and terms are used, the intent and meaning shall be interpreted as follows:

A. "Owner" - Board of Supervisors, County of Mendocino, or its authorized agents or assignees.

B. "Agent" - The Agent acting for the County, which shall be either the County General Services Agency Director or his/her designee, or the County Executive Officer or his/her designee.

C. "Contractor" - The person or persons, partnership, corporation, or combination thereof, private or municipal, who have entered into a contract with the County, as party or parties of the second part or his/her or their legal representatives.

D. "Specifications" - The directions, provisions and requirements contained in these Specifications as supplemented by the Supplementary Conditions. Whenever the term "These Specifications" is used in this book, it means the provisions as set forth in this book.

E. "Paragraph" - The particular section of subdivision herein designated by a number.

F. "Laboratory" - The designated laboratory authorized by the County to test materials and work involved in the Contract.

G. In the case of conflict between the Standard Specification and these Specifications, these Specifications shall take precedence over and be used in lieu of such conflicting portions:

A.W.S.	American Welding Society
A.S.T.M.	American Society for Testing Materials
A.S.A.	American Standard Association
N.B.F.U.	National Board of Fire Underwriters
N.B.S.	National Bureau of Standards
A.S.M.E.	American Society of Mechanical Engineers
A.R.I.	American Refrigeration Institute
N.E.M.A.	National Electrical Manufacturers Association
U.L.	Underwriter's Laboratories
E.T.L.	Electrical Testing Laboratories
A.C.I.	American Concrete Institute
F.A.	Federal Specifications
A.I.S.C.	American Institute of Steel Construction

H. The County and the Contractor are those named as such in the Agreement. They are treated throughout the Contract Documents as if each were of the singular number and the masculine gender.

I. When the words "Approved", "Satisfactory", or "Equal", "As Directed", etc. are used, approval by the County is understood.

J. All Federal, State laws and local laws shall govern the construction of the Contract, and all rules, ordinances and requirements of authorized officials shall be complied with.

K. It is understood that any reference to the Specifications or designation of the American Society for Testing Materials, Federal Specifications or other standard, code, or order, refers to the most recent or latest amended specification or designation.

2. EXAMINATION OF PLANS AND SPECIFICATIONS

The Bidder shall examine carefully the site of the work contemplated and the proposal, plans, specifications, and Contract forms thereof. It will be assumed that the Bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and material to be furnished, and as to the requirements of these Specifications.

3. DRAWINGS AND SPECIFICATIONS

A. Figured dimensions on the drawings shall govern but work not dimensioned shall be as directed. Work indicated but not particularly detailed or specified shall be equal to similar parts that are detailed or specified, or as directed. Full-size detailed shall take precedence over scale drawings as to shape and details of construction. It is intended that scale drawings, full-size details and specifications should agree but should any discrepancy or apparent error occur in plans and specifications, or should any work of others affect this work, the Contractor shall notify the County at once; if the Contractor proceeds with the work affected without instruction from the County, he shall make good any resultant damage or defect.

B. All misunderstandings of drawings or specifications shall be clarified by the County, whose decision shall be final.

C. Any work called for by the drawings and not mentioned in the Specifications, or vice versa, is to be furnished as though fully set forth by both. Where not specifically stated otherwise, all work and materials necessary for each unit of construction, including special construction for any specific brand or shape of material called for even though only briefly mentioned or indicated, shall be furnished and installed fully and completely as a part of the Contract.

D. Lists, rules and regulations referred to are recognized printed standard and shall be considered as one and a part of these Specifications within the limits specified.

E. "General Conditions" apply with equal force to all of the work, including authorized extra work.

F. For convenience, the Technical Specifications are arranged in Divisions and further divided into various sections. It is to be understood, this separation is for the convenience of all parties involved and is not to be considered as the limits of the

work required of any separate trade. The terms and conditions of such limitations are wholly between the County and the Contractors during bidding and construction phases, i.e., all work shown, as well as for the proper completion of the project as a whole, shall be coordinated by the Contractor and his Subcontractors during bidding and construction and shall be provided in this Contract.

4. CONDUCT OF WORK

A. The County reserves the right to do other work in connection with the project by contract or otherwise. The contractor shall at all times conduct his work so as to impose no hardship on the County or others engaged in the work. The contractor shall adjust, correct, and coordinate his work with the work of others so that no discrepancies shall result in the whole work.

B. The Contractor shall provide at his own cost and risk all labor, material, water, power tools, machinery, scaffolding, and framework for the execution of the work. Equipment shall be adequate and as approved.

The Contractor shall obtain all necessary measurements from the work and shall check dimensions, levels, and construction and layout and supervise the construction, for correctness of all of which he shall be responsible.

C. Where work of one trade joins or is on other work, there shall be no discrepancy when same is completed. In engaging work with other materials, marring or damaging same shall not be permitted. Should the improper work of any trade be covered by another which results in damage or defects, the whole work affected shall be made good without expense to the County.

D. The Contractor must anticipate relation of all parts of the work and at the proper time furnish and set anchorage, blocking or bonding as required. Anchorage and blocking necessary for each trade shall be a part of the same, except were stated otherwise.

E. Assistance required by the County in obtaining measurements or information on the work shall be furnished accurately and fully without cost to the County.

5. OWNERSHIP OF DRAWINGS

All plans and specifications shall remain the property of the County and shall be returned to the office of the County Facilities and Fleet Division Manager or shall be accounted for by the Contractor before the final certificate will be issued.

6. PUBLIC AND COUNTY CONVENIENCE AND SAFETY

The Contractor shall furnish, erect, and maintain such fences, barriers, lights and signs as are necessary to give adequate warning to the public at all times and of any dangerous conditions until final acceptance of the work by the County.

7. ACCIDENT PREVENTION

A. It shall be the Contractor's responsibility to keep himself fully informed of all existing and future safety regulations, Codes, OSHA requirements, and other laws and regulations governing the work which may in any manner affect anyone in and around the project or engaged or employed in the work, or materials, equipment, etc. used in the work or which in any way affect the conduct of the work.

B. The Contractor shall appoint a Safety Officer for the project and submit his name to the County.

C. The Contractor shall supply the County with a Material Safety Data Sheet (MSDS) on each hazardous substance to be used by the Contractor on the project.

D. The Contractor and his Safety Officer shall be solely responsible for ensuring compliance with those Codes, regulations, OSHA requirements, and for discovering and correcting any code violations or unsafe conditions.

E. Reports of all lost-time accidents shall be promptly submitted to the Owner, giving all pertinent information.

8. RESPONSIBILITY FOR DAMAGE

The County shall not be answerable or accountable in any manner for: (1) any loss or damage that may happen to the work or any part thereof, for any loss or damage to any of the materials or other things used or employed in performing the work; (2) injury to or death of any person or persons, either workers or the public; (3) damage to property from any cause which might have been prevented by the Contractor or his workers or anyone employed by him. The Contractor shall be responsible for any liability imposed by law for injuries to or death of any person including, but not limited to, workers and the public or damage to property resulting from defects or obstructions or from any cause whatsoever during the progress of the work or at any time before its completion and final acceptance. The Contractor shall indemnify, save harmless and defend the County of Mendocino, its elected or appointed officers, agents, employees or volunteers connected with the work, from all claims or actions for injuries or death of any person, or damage to property, resulting from the Contractor's performance of the Contract. With respect to third party claims against the Contractor, the Contractor waives any and all rights to any type of express or implied indemnity against the County of Mendocino, its elected or appointed officers, agents, employees or volunteers.

In addition to any remedy authorized by law, so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the County may be retained by the County until disposition has been made of such suits or claims for damages as aforesaid.

9. LAWS TO BE OBSERVED

The Contractor shall keep himself fully informed of all existing and future State, Federal and local laws, codes and regulations which in any manner affect those engaged or employed in the work, or the materials used in the work, or which in any way affect the conduct of the work, and of all such orders and decrees of bodies and tribunals having any jurisdiction or authority over the same and shall be solely responsible for insuring compliance with those laws, codes and regulations.

A partial, though not necessarily complete listing of laws to be observed by the Contractor is as follows:

A. Federal Americans with Disabilities Act of 1990.

B. Federal Labor Standards Act.

C. The Anti Kick-Back regulations found in 29 CFR Part 3.

D. All contract clauses required by 29 CFR 5.5 (a) and (c), 20 U.S.C. 1232b ; 40 U.S. C. 276a, 276c, 327-332; 29 CFR Parts, (926).

E. Nondiscrimination clause and Certification of Non-Segregated Facilities prescribed by Executive Order No. 11246, September 24, 1965, as amended by Executive Order 11375.

F. Executive Order No. 11288 of July 7, 1966 (31 FR 9261) "Prevention, Control and Abatement of Water Pollution".

G. Executive Order 11988, relating to evaluation of flood hazards.

H. Compliance with all Federal, State and local requirements for handicapped access, fire safety and seismic resistance.

10. BONDS REQUIRED

The successful bidder shall furnish bonds as required in the document entitled "Instructions to Bidders" which is part of these Contract documents.

11. INSURANCE

The Contractor, at his expense, shall secure and maintain at all times during the entire period of performance under this Contract, insurance as set forth below with insurance companies acceptable to the County of Mendocino.

The Contractor shall provide to the County of Mendocino certificates of insurance with endorsements properly executed by an officer or authorized agent of the issuing insurance company evidencing coverage and provisions as stated below:

A. INSURED

Name the County of Mendocino, its elected or appointed officials, employees, agents and volunteers as additional insured with regard to damages and defense of claims arising from: (a) activities performed by or on behalf of the Named Insured, (b) products and completed operations of the Named Insured, (c) Premises owned, leased or used by the Named Insured, or (d) Ownership, operation, maintenance, use, loading or unloading of any vehicle owned, leased, hired or borrowed by the Named Insured, regardless of whether liability is attributable to the Named Insured or a combination of the Named Insured and the County of Mendocino, its elected or appointed officials, employees, agents and volunteers.

B. SEVERABILITY OF INTEREST

Provide that the inclusion of more than one named insured shall not operate to impair the rights of one insured against another insured, and the coverages afforded shall apply as though separate policies had been issued to each insured.

C. CONTRIBUTION NOT REQUIRED

Provide that as respects: (a) work performed by the Named Insured on behalf of the County of Mendocino; or (b) products sold by the Named Insured to the County of Mendocino; or (c) premises leased by the Named Insured from the County of Mendocino; or (d) ownership, operation, maintenance, use, loading or unloading of any vehicle owned, leased, hired or borrowed by the Named Insured, the insurance afforded by this policy shall be primary insurance as respects the County of Mendocino, its elected or appointed officials, employees, agents and volunteers; or stand in an unbroken chain of coverage excess of the Named Insured's scheduled underlying primary coverage. In either event, any other insurance maintained by the County of Mendocino, its elected or appointed officials, employees, agents and volunteers shall be an excess of this insurance and shall not contribute with it.

D. COVERAGE BELOW MINIMUM REQUIRED NOTICE

Provide that the limits of insurance afforded by this policy shall not fall below the minimum requirements of the County of Mendocino without notice to the County of Mendocino by certified mail return receipt requested. Such notice shall be addressed to: County of Mendocino, 501 Low Gap Road, Ukiah, Calif. 95482, Attn: Risk Management.

E. CANCELLATION NOTICE

Provide that the insurance afforded by this policy shall not be suspended, voided, canceled, non-renewed or reduced in coverage or in limits except after thirty (30) day's prior written notice, delivered in person or by First Class U.S. Mail, has been given to the County of Mendocino. Such notice shall be addressed to: County of Mendocino, 841 Low Gap Road, Ukiah, Calif. 95482, Attn: Risk Management.

The contractor shall furnish the County of Mendocino certificate(s) of insurance evidencing Workers Compensation Insurance coverage to cover its employees. The Contractor shall require all subcontractors similarly to provide Workers Compensation Insurance as required by the Labor Code of the State of California for all of the Contractor's and subcontractors' employees.

The Contractor shall not commence work, nor shall he allow his employees or subcontractors or anyone to commence work until all insurance required and provisions contained herein have been submitted to and accepted by the County of Mendocino. Failure to submit proof of insurance as required herein may result in awarding said Contract to another bidder. Failure to comply with the insurance requirements set forth herein shall constitute a material breach of contract and, at County of Mendocino's option, shall subject this Contract to termination.

Insurance coverage in the minimum amounts set forth herein shall not be construed to relieve the Contractor for liability in excess of such coverage, nor shall it preclude the County of Mendocino from taking such other action as is available to it under any other provisions of this Contract or otherwise in law.

SCOPE OF LIABILITY COVERAGES

The contractor shall furnish to the County of Mendocino certificates of insurance evidencing at the minimum the following:

1. Public Liability-Bodily Injury (not auto) $500,000 each person; $1,000,000 each accident,

   and

   Public Liability-Property Damage (not auto) $500,000 each occurrence; $1,000,000 aggregate.

   ---or---

   Combined Single Limit Bodily Injury Liability and Property Damage Liability (not auto) $1,000,000 each occurrence.

2. Vehicle-Bodily Injury $500,000 each person, $1,000,000 each occurrence,

   and

   Vehicle-Property Damage $1,000,000 each occurrence.

   ---or---

   Combined Single Limit Vehicle Bodily Injury and Property Damage Liability $1,000,000 each occurrence.

12. WORKERS COMPENSATION CERTIFICATION

Contractor certifies as follows:

"I am aware of the provisions of Section 3700 of the Labor Code which require every employer to be insured against liability for Workers Compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this Contract". (Labor Code Section 1861)

13. CONTRACTOR'S RESPONSIBILITY FOR WORK

Until the formal acceptance of the work by the County, the Contractor shall have the charge and care thereof and shall bear the risk of injury or damage to any part thereof or to materials or things employed in doing the work or stored on the site by the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, replace, and make good all injuries or damages to any portion of the work occasioned by any of the above caused before final acceptance and shall bear the expense thereof, except such injuries or damages occasioned by acts of the Federal Government or the public enemy. The Contractor's responsibility also extends to adjoining property as related to the construction operation.

14. RESPONSIBILITY OF COUNTY

The County shall not be held responsible for the care or protection of any material or parts of the work prior to final acceptance, except as expressly provided in these Specifications.

15. COOPERATION BETWEEN CONTRACTORS

Where two or more contractors are employed on related or adjacent work, each shall conduct his operations in such a manner as not to cause any unnecessary delay or hindrance to the other. Each contractor shall be responsible to the other for all damage to the work, to person or property, or for loss caused by failure to furnish the work within the time specified for completion.

Should the Contractor, through acts of neglect on the part of any Contractor, suffer loss or damage to the Work, the Contractor agrees to settle with such other Contractor by agreement. If such other Contractor should file claim against the County on account of alleged damages to be sustained, the County shall notify the Contractor who shall, at his expense, indemnify and save harmless the County against any such claim.

16. SUBCONTRACTING AND ASSIGNMENT

The Contractor shall give his personal attention to the fulfillment of the Contract and shall keep the work under his control. Should the Contractor subcontract any part of his Contract, the Contractor shall be fully responsible to the County for the acts and omissions of his subcontractor and of the persons either directly or indirectly employed by the subcontractor as he is for the acts and omissions of persons directly employed by himself.

No subcontractor will be recognized as such, and all persons engaged in the work on construction shall be considered as employees of the Contractor.

17. PERMITS AND LICENSES

The Contractor shall procure all permits and licenses, pay all charges and fees, and file all notices necessary and incidental to the due and lawful prosecution of the work.

18. PATENTS

The Contractor shall assume all responsibilities arising from the use of patented materials, equipment, devices or processes used on or incorporated in the work.

19. LIENS

Liens shall be enforced as provided by California State Law pertaining to Public Works.

20. CHANGES IN THE WORK

A. The County may order changes in the work, in which event the Contract sum shall be adjusted by one or more, or a combination of, the following methods:

1. Unit bid prices previously approved or as may be agreed upon.

2. An agreed lump sum substantiated by Contractor, itemizing labor, material, equipment, overhead, profit, bond, etc.

3. By ordering Contractor to proceed with work and keep correct account with vouchers the actual cost of:

a. Labor, including foreman;
b. Materials entering permanently into the work;
c. The ownership or rental cost of construction plant and equipment during the time of use on the extra work;
d. Power and consumable supplies for the operation of power equipment;
e. Insurance;
f. Social Security and old age and employment contribution.

B. To the cost under (2) and (3), there may be added a fixed fee to be agreed upon but not to exceed fifteen percent (15%) for the estimated cost of the work. The fee shall be compensation to cover the cost of administrative overhead, and profit.

C. On changes which involve a credit to the County, no allowances for overhead need be figured.

D. All such change orders and adjustments shall be in writing. Claims by Contractor for extra cost shall be made in writing before executing the work involved.

E. All change orders shall be reviewed and approved by the County.

21. COUNTY'S RIGHT TO TERMINATE CONTRACT

If the Contractor should refuse or neglect to properly perform or prosecute the work or if he should substantially violate any provision of the Contract, then the County may, without prejudice to any other right or remedy upon seven (7) days written notice to the Contractor, terminate the services of the Contractor and take possession of the premises, and all materials, tools, and equipment thereon and complete the work. The expense thereof shall be deducted from the balance otherwise due the Contractor. If such expense should exceed such unpaid balance, then the Contractor shall pay the difference to the County.

22. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE CONTRACT

If the work is stopped for a period of thirty (30) days under an order of any court or other public authority having jurisdiction, or as a result of an act of government, such as a declaration of a national emergency making materials unavailable, through no act or fault of the Contractor or a Subcontractor or their agents or employees or any other persons performing any of the work under a contract with the Contractor, or if the work should be stopped for a period of thirty (30) days by the Contractor because no certificate for payment has issued as provided in Paragraph 25 or because the County has not made payment thereon as provided in Paragraph 25, then the Contractor may, upon seven (7) additional days' written notice to the County, terminate the Contract and recover from the County payment for all work executed and for any proven loss sustained upon any materials, equipment, tools, construction equipment and machinery, including reasonable profit and damages.

23. TIME OF COMPLETION AND LIQUIDATED DAMAGES

A. In case all the work called for under the Contract is not completed before or upon the expiration of the time limit as set forth in these specifications, damage will be sustained by the County, and it is impracticable to determine the actual damage which the County will sustain in the event of and by reason of such delay. It is therefore agreed that the Contractor will pay to the County the sum of money per calendar day for each day's delay beyond the time prescribed as required in the document entitled "Instructions to Bidders", which is a part of these Contract Documents. The Contractor agrees to pay such liquidated damages as herein provided, and in case the same are not paid, agrees that the County may deduct the amount thereof from any money due or that may become due the Contractor under the Contract.

B. In case the work called for under the Contract is not finished and completed in all parts and requirements within the time specified, the County shall have the right to extend the time for completion or not, as may best serve the interest of the County. If the County decides to extend the time limit for the completion of the Contract, the County shall further have the right to charge the Contractor, his heirs, assigns or sureties, and to deduct from the final payment for the work, all or any part, as it may deem proper, of the actual cost of County, including inspections, superintendence, and other overhead expenses directly chargeable to the Contract, and which accrue during the period of such extension. The cost of final inspections shall not be included in such charges.

C. The Contractor shall not be assessed with liquidated damages nor the cost of County's services and inspection during any delay in the completion of the work caused by acts of God or the public enemy, acts of the County, fire, flood, earthquake, epidemics, quarantine restrictions, strikes, freight embargoes, shortages of materials, labor, fixtures or equipment (provided the Contractor furnishes satisfactory and acceptable proof that he has made diligent attempts to obtain same) and unusually severe weather or delays of subcontractors due to such causes, provided the Contractor shall within ten (10) days from the beginning of such delay notify the County in writing of the delay. County's findings of fact thereon shall be final and conclusive.

D. The County agrees that changes in work ordered pursuant to Paragraph 20 and extensions of completion time made necessary by reasons thereof, shall in no way release any guarantee given by the Contractor or the Contract let hereunder, nor shall such changes in the work relieve or release the sureties on bonds executed pursuant to these specifications. Sureties shall be deemed to have expressly agreed to any change in the work and to any extension of time made by reason thereof.

24. ACCEPTANCE

A. The Contract will be accepted as completed only when the whole and entire Contract shall have been completed satisfactorily to the County. In judging the work, no allowance for deviations from the original plans and specifications will be made unless already approved in writing at proper times and in a manner as called for herein.

B. Should it become necessary to occupy a portion of the work before the Contract is fully completed, such occupancy shall not constitute acceptance.

25. PARTIAL PAYMENTS

Prior to submitting and as a condition of approval of the first progress payment application, the Contractor shall submit a schedule of values acceptable to the County providing a breakdown of the contract value by trade division such that the County can accurately assess the percentage completion of the project.

On the twenty-fifth (25th) day of each month, the Contractor shall submit to the County an application for payment, on a form acceptable to the County, showing an itemized statement for work that has been performed on a complete percent basis based on the previously approved schedule of values. The County, within thirty (30) days of receipt of application that meets the County's approval shall issue to the Contractor a certificate for ninety percent (95%) of the amount the County finds due for work that has been performed.

The contractor shall submit certified copy of payroll showing payment of Davis-Bacon Act wages with each request for payment submitted.

26. FINAL PAYMENT

Upon completion of the Contract, the County will cause to be made a final estimate of the amount of work done, and the value of such work. After approval by the County representative, the County shall pay the remainder due on the contract (with the exception of retainage) after deducting there from, all previous payments. All amounts retained (retainage) under the provisions of the Contract shall be due and payable 30 days from the date of acceptance in writing of the completion of Contract and / or Notice of Completion issued by the County representative. All prior partial estimates and payments shall be subject to correction in the final estimate and payments. Payment and the final estimate are due within thirty-five (35) days from the recorded date of the Notice of Completion, provided all as-built drawings, equipment manuals, instructions to the owner and guarantees have been received and accepted by the County.

27. PAYMENT WITHHELD

The County may withhold or, on account of subsequently discovered evidence, may nullify the whole or part of any certificates to such extent as may be necessary to protect the County from (1) defective work not remedied, (2) asserted claims against Contractor, (3) failure of the Contractor to make payments properly to employees or for material or labor, (4) any reasonable doubt that the Contract work can be completed for the balance then unpaid, or (5) damage to another contractor.

28. FAULTY WORK AND MATERIALS

The Contractor shall promptly remove from the premises all materials condemned by the County as failing to conform to the Contract, whether incorporated in the work or not. The Contractor shall promptly replace and re-execute his own work in accordance with the Contract and without expense to the County. The Contractor shall bear the expense of making good all work of other contractors destroyed or damaged by such removal.

If the Contractor does not remove such condemned work and materials within reasonable time, fixed by written notice, the County may remove them and may store the materials at the expense of the Contractor. If the Contractor does not pay the expenses of such removal within ten (10) days thereafter, the County may upon ten (10) days written notice, sell such materials at auction or at private sales and shall account for the net proceeds thereof after deducting all costs and expenses that should have been borne by the Contractor.

29. TEMPORARY SUSPENSION OF WORK

The County shall have the authority to suspend the work wholly or in part, for such period as it may deem necessary, due to unsuitable weather or to such other conditions as are considered unfavorable for the suitable progression of the work, or for such time as it may deem necessary due to the failure of the Contractor to carry out orders given by County, or to perform any provision of the Contract. The Contractor shall immediately obey such order of the County and shall not resume work until ordered in writing by the County.

30. SAMPLES

When requested, the Contractor shall submit for the County's review samples of the various materials, together with the finish thereof, as specified for and intended for use in the work. Samples of bulk materials shall be selected by the lab. All materials and workmanship shall in all respects be equal to the samples so submitted and reviewed. Samples shall be sent or delivered to the County, samples and delivery charges paid by Contractor. Samples will be returned to the Contractor if requested, shipping or delivery charges collect.

31. CLEANING AND REMOVAL OF DEBRIS

The Contractor shall, as directed by the County during the progress of the work or as indicated elsewhere in these documents, remove and properly dispose of dirt and debris and shall keep the premises reasonably clean. Upon completion of the work, the Contractor shall remove all of his equipment and unused materials provided for the work and shall put the building and appurtenances in a neat and clean condition and shall do all cleaning and washing required by the specifications.

32. OBSTRUCTIONS

The Contractor may be required to work around public utility facilities and other improvements which are to remain in place within the construction area. The Contractor shall be held liable to the owners of such facilities and improvements for any damage or interference with service resulting from the Contractor's operation.

The exact location of underground facilities and improvements within the construction area, whether shown on the drawings or not, shall be ascertained by the Contractor before using equipment that may damage such facilities or interfere with their service.

33. SUPERINTENDENT IN CHARGE

The Contractor shall keep on the work at all times and until the acceptance certificate is issued a competent superintendent or foreman for the purpose of receiving and executing without delay any orders from County in keeping with the terms of the Contract. This foreman shall have charge of the plans and specifications kept on the job. He shall be instructed to familiarize himself closely with all provisions of the plans and specifications and to follow the same accurately.

34. STORAGE OF MATERIALS AND EQUIPMENT

Materials and equipment shall not be stockpiled or placed outside of the site property lines unless written permission is obtained by the appropriate owner or political subdivision having jurisdiction over the adjacent property, roads, streets, etc.

35. GENERAL GUARANTY

Neither the final payment nor any partial payment, nor partial or entire use of the premises by occupancy by the County shall constitute an acceptance of the work not completed in accordance with the Contract. Final Payment or partial payment or partial or entire use of the premises by occupancy shall not relieve the Contractor of liability with respect to any warranties or responsibilities for faulty materials or workmanship. The Contractor shall remedy any defect in the work and pay for any damage to other work resulting therefrom which shall appear within a period of one (1) year from the date of final acceptance of the work, unless a longer period is specified elsewhere in these specifications. The County shall notify the Contractor of observed defects with reasonable promptness.

36. MATERIALS SUBMITTALS AND SUBSTITUTIONS

Materials and substitutions shall be governed by the relevant sections elsewhere in these documents. If not specified, the following shall govern.

A. Specific reference to materials, appliances, fixtures and equipment by trade name is intended to be used as standard, but this implies no right on the part of the Contractor to use other materials, fixtures, appliances, equipment, until reviewed by the County.

B. The County alone shall determine what will be considered as equal, but the burden of proof as to quality, utility and function, etc. shall be upon the Contractor.

If the Contractor desires to substitute any item, he shall in writing state the cost of such item and the original item named in the specifications if requested and shall submit a substitution warranty in the format shown in the specifications.

C. As soon as practicable and within twenty (20) days after official award of Contract and before any fixtures, materials or equipment are purchased, the Contractor shall submit to the County a complete list of materials, fixtures and equipment giving the manufacturers' names, catalog numbers, etc., and, when requested, the original and substitute item of each article which he proposes to install as a substitution.

D. Requests for substitution will not be considered after the above period of time unless the item specified is not obtainable or, in the opinion of the County, such substitution would serve the County's interest.

37. CONSTRUCTION, MATERIAL AND LABOR COST SCHEDULES

A. The successful Contractor shall submit the following schedules to the County within ten (10) days after commencing the work:

1. A construction schedule indicating the start and finish of each phase of the work.
2. A detailed statement of the cost of material and labor included in the original estimate for each phase of the work so arranged that the value of the work as it progresses may be readily determined.

38. CONFERENCES

At any time during the progress of the work, the County may request the Contractor to attend a conference of any or all of the Contractors engaged on the work, and any notice of such conference shall be duly observed and complied with by the Contractor.

39. INSPECTION AND PAYMENTS - NOT ACCEPTABLE

The fact that the work and materials have been inspected by the County of Mendocino and payments on account have been made does not relieve the Contractor from the responsibility of replacing and making good any defective work or materials that may be discovered within one (1) year from the date of the completion of the work by the Contractor and its acceptance by the County. [Five (5) years for roof.]

40. RETURN OF DRAWINGS AND SPECIFICATIONS

All plans and specifications shall be returned to the Office of the County Director of General Services or shall be accounted for by the Contractor before the final certificate will be issued.

41. ARRANGEMENT OF SPECIFICATION SECTION

A. For convenience, these specifications are arranged in several sections, but such separation shall not be considered as limiting any work required to a particular trade. The Contractor shall in cooperation with other contractors establish responsibility for any work required by the plans and specifications which may be improperly arranged or not included in the appropriate section.

B. In areas where one trade meets another for joining, the Contractor is responsible to be certain that all work shown is included in his bid.

42. QUALITY OF MATERIALS AND LABOR

All materials used on this Contract shall be new and the best market quality, unless specified or shown otherwise. All labor used on this Contract shall be competent and skilled for the work. All work executed under this Contract shall be done in the best, most thorough, substantial and workmanlike manner.

All material and labor not meeting these standards shall be removed. The County may refuse to issue any certificate of payment until all defective materials or work have been removed, and other material of proper quality substituted therefor.

43. INCOMPETENT WORKERS

If at any time any foreman or worker who shall be employed by the Contractor shall be declared by the County to be incompetent or unfaithful in executing the work, the Contractor, on receiving written notice, shall forthwith initiate appropriate action to dismiss such person from the work.

44. COUNTY TO DECIDE

All matters of color, texture, design, interpretation of plans and specifications shall be referred by the Contractor to County, whose decision thereon shall be final.

45. CODES

All work and materials shall be in full accordance with the latest rules and regulations of the State Fire Marshal; the Safety Orders of the Division of Industrial Safety; the California Electric Code; the California Building Code; California Mechanical Code; the California Fire and Plumbing Codes; OSHA and other applicable State and local codes and laws. Nothing in these plans or specifications is to be construed to permit work not conforming to these Codes.

46. PAYMENT OF FEDERAL, STATE OR LOCAL TAXES

Any Federal, State or Local tax payable on articles furnished by the Contractor under the Contract shall be included in the Contract price and paid by the Contractor.

47. LIMITATIONS OF HOURS OF WORK

Eight (8) hours of labor constitutes a legal day's work. The Contractor shall forfeit as a penalty $25.00 for each worker employed in the execution of the Contract by the Contractor for each calendar day which such worker is required or permitted to work more than eight (8) hours in one (1) calendar day and forty (40) hours in any one (1) calendar week in violation of the provisions of the California Labor Code, and in particular Sections 1810 and 1816. Work performed by employees of Contractors in excess of eight (8) hours per day and forty (40) hours during any one (1) week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day at not less than one and one-half (1 & 1/2) times the basic rate of pay, as provided in Section 1815.]

48. PAYMENT OF NOT LESS THAN THE GENERAL PREVAILING RATE OF PER DIEM WAGES

A. The Contractor shall pay his workers on all work included in this Contract not less than the general prevailing rate of per diem wages for legal holiday and overtime work in said locality. Such per diem wages shall not be less than the stipulated rates contained in a schedule thereof which has been ascertained and determined by the State Director of Industrial Relations to be the general prevailing rate of per diem wages for each craft or type of worker needed to execute this Contract.

B. The Contractor shall comply with Labor Code Section 1775. In accordance with Section 1775, the Contractor shall forfeit as a penalty twenty-five dollars ($25.00) for each calendar day or portion thereof, for each worker paid less than the stipulated prevailing rates for such work or craft in which such worker is employed for any work done under the Contract in violation of the provisions of the Labor Code in particular Labor Code Sections 1770 and 1780. In addition to said penalty, and pursuant to Section 1775, the difference between such stipulated prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the stipulated prevailing wage rate shall be paid to each worker by the Contractor.

49. LABOR CODE CLARIFICATION

It is to be understood that references to the California Labor Code shall mean the current Code or as may be amended during the period of the Contract.

50. NOTIFICATION OF READINESS FOR REQUIRED TESTS AND INSPECTIONS

The Contractor shall be responsible to notify all inspectors, testing agencies, and County representatives a minimum of seventy-two (72) hours before required tests and/or inspections.

51. RESPONSIBILITY FOR PROJECT SAFETY AND CONSTRUCTION TECHNIQUES

Specifically omitted from the services of the County are all design and construction review services relating to the Contractor's safety precautions or to means, methods, techniques, sequences, or procedures required for the Contractor to perform his work.

Omitted services include, but are not limited to, shoring, scaffolding, underpinning, temporary retainment of excavations and any erection methods and bracing.

52. RECORD DRAWINGS

A. The Contractor shall furnish one complete set of clean "Record" drawings to the County prior to project acceptance, showing clearly any changes made during construction. Record drawings shall be in accordance with Section 017839 Project Record Documents.

B. In addition to any changes, all mechanical, electrical and plumbing items concealed in the building and underground, actually installed and routed. Depth below the surface to top of underground item shall be indicated.

C. All underground items shall be dimensioned from permanent reference points in a manner that they can be easily found in the field at a later time.

D. Each sheet of the "Record" drawings shall be identified with the following label to be signed by the Contractor:

These are record drawings which have been prepared or supervised by the undersigned.

_____

Contractor Date

E. The Contractor is solely responsible for the preparation, completeness, and accuracy of the "Record" drawings. The County and its representatives are not responsible for reviewing the "Record" drawings.

53. OCCUPANCY OR USE BEFORE ACCEPTANCE OF COMPLETION

The County may occupy any building or portion thereof or use any improvement contemplated by the Contract prior to the completion of the entire work. A list of work to be completed and corrected by the Contractor, if any, shall be prepared and agreed to between the County and the Contractor before occupancy or use. Such occupancy or use shall not operate as an acceptance of any part of the work but shall start the guaranty-warranty period on the structure or portion thereof so occupied or improvement of equipment so used, provided, however, that such occupancy shall not start the guaranty-warranty period as to items appearing on the list of work to be completed and corrected. No such occupancy or use shall be deemed to have occurred unless and until the County has given the Contractor formal written notice of intention to so occupy or use, specifying the portion or portions of the structure, improvement or equipment which will be deemed so occupied or used.

54. COMPLIANCE WITH HANDICAPPED ACCESS LAWS

A. It is the County's intent for all features on these plans and specifications to conform to applicable regulations for the accommodations of physically handicapped persons in buildings and facilities used by the public, whether or not said plans and specifications so conform.

B. It shall be the responsibility of the manufacturers, suppliers and distributors to ensure that all manufactured and fabricated products, devices and items they supply for this project conform to applicable regulations of Title 24 of the California Code of Regulations.

C. When shop drawings and/or manufacturers' product literature, and other matters subject to handicapped regulations are submitted to County, the following shall be provided:

1. Statement that the item shown complies with the handicapped regulations of Title 24 of the California Code of Regulations.

2. Show all required dimensions, heights, clearances, and locations that must be followed when items are installed on project.

55. CONTRACT AMBIGUITY

This Contract shall be deemed to have been prepared jointly by the parties signing the Contract and if any inconsistencies or ambiguities exist, they shall not be interpreted or construed against any of the parties as the drafter.

56. FAIR EMPLOYMENT PRACTICES/NONDISCRIMINATION

The Contractor shall comply with Federal and State Fair Employment Practices provisions.

The Contractor, in connection with performance of work under this agreement, agrees to comply with the rules and regulations which deal with or relate to nondiscrimination set forth as follows:

A. During the performance of this Contract, the Contractor and its subcontractors shall not deny the Contract's benefits to any person on the basis of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, sex or age, nor shall they discriminate unlawfully against any employee or applicant for employment because of race, religious creed, color, national origin, ancestry, physical disability, mental disability, medical condition, marital status, age, or sex. The contractor shall insure that the evaluation and treatment of employees and applicants for employment are free of such discrimination.

B. The Contractor shall comply with the provisions of the California Fair Employment and Housing Act (Gov. Code, sections 12900 *et seq*.), the regulations promulgated thereunder (2 Cal. Code of Regulations sections 7285.0 *et seq*.), and Government Code Sections 11135 - 11139.5).

C. The Contractor shall permit access by representatives of the Department of Fair Employment and Housing and the County upon reasonable notice at any time during the normal business hours, but in no case less than 24 hours' notice, to view such of its books, records, accounts, other sources of information and its facilities as said Department or County shall require to ascertain compliance with this clause.

D. The Contractor and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

E. The Contractor shall include the above nondiscrimination and compliance provisions in above subparagraphs A and B in all subcontracts to perform work under the Contract.

END OF SECTION

SECTION 00 81 10

UNFORESEEN PHYSICAL CONDITIONS

PART 1 - GENERAL

1.1 SUMMARY

This Section includes special requirements for unforeseen hidden conditions, differing site conditions and underground facilities as required for California Public Works Contracts.

1.2 UNFORESEEN SITE CONDITIONS

A. Pursuant to Section 7104 of the California Public Contract Code, if any of the following conditions, hereinafter called hidden conditions, are encountered at the site, then Contractor shall promptly, before such conditions are disturbed and in no event later than three (3) days after discovery, notify County in writing using the "Hidden Conditions Report" attached to this Document:

1. Material that the Contractor believes may be hazardous waste material, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or a Class III disposal site in accordance with provisions of existing law.

2. Subsurface or latent physical conditions at the site or in the building differing materially from those represented in the Contract Documents.

3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents or conditions that could be observed by examination of the site and the Reference Documents.

B. Conditions that are not unforeseen, hidden, unknown or differing site and building conditions include but are not limited to the following.

1. All that is indicated in or reasonably interpreted from the Contract Documents.

2. All that is indicated in or reasonably interpreted from the Reference Documents specified in Section 010100, “Summary of Work”.

3. All that could be seen on site and that could be observed.

4. Conditions that are materially similar or characteristically the same.

5. Conditions where the location of the building component is in proximity were indicated in or reasonably interpreted from the Contract Documents or Reference Documents.

C. County will promptly investigate the conditions reported which appear to be unforeseen conditions.

1. If the County determines that the reported conditions are inherent in work of the character provided for in the Contract Documents or observed by examination of the site and Reference Documents, or that the condition is not hidden, unforeseen or materially different, Contractor shall execute the Work at no additional cost to County.

2. If County determines that the conditions are hidden or differing conditions and that they will materially cause a decrease or increase in Contractor's cost of any portion of the work, Contract Modification will be issued for compensation of such portion of the work as provided in the General Conditions.

3. If the County determines that the conditions are hidden or differing conditions and that they will materially affect the performance time, the Contractor, upon submitting a written request, will be granted an extension of time subject to the provisions of the General Conditions.

   a. Time extensions or contract costs will not be granted for delays that could be or could have been avoided by Contractor redirecting his forces and equipment to perform other work on the Contract.

D. Should Contractor disagree with County's determination, Contractor shall submit a Request for Change (RFC) to County that the condition is not indicated in or reasonably interpreted from the Contract Documents, and that the condition is not similar in character to the material that could have been observed by examination of the site and Reference Drawings, but that the condition is materially different and the condition is unforeseen and unknown.

1. Contractor shall submit proof with written explanation, drawings, photographs, material and labor cost breakdowns, and other relevant data to show the condition.

2. County will review Contractor's submission and make a determination. Contractor shall not file for claim or RFC before County makes the determination.

3. In the event of continued disagreement, Contractor shall not be excused from any scheduled completion date provided for by the Contract but shall proceed with all work to be performed under the Contract.

4. Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of RFC and protests between the contracting parties.

1.3 REMOVAL, RELOCATION, OR PROTECTION OF EXISTING UTILITIES

A. In accordance with the provisions of Section 4215 of the California Government Code, County will assume the responsibility for the removal, relocation, or protection of existing main or trunk-line utilities located on the site of the Contract work, if such utilities are not identified in the Contract Documents.

B. Contractor shall immediately notify County and the public utility in writing of such utility facilities it discovers while performing the work which are not identified in the Contract Documents.

1. Contractor shall negotiate with the owner of the utility, who shall have the sole discretion to perform repairs or relocation work or permit Contractor to do such repairs or relocation work at a reasonable price.

C. Contractor shall not be assessed liquidated damages for delay in Substantial Completion if the delay was caused by such existing utilities in direct conflict with the work and not shown on the Drawings.

D. Contractor will be compensated under the provisions of Article 7 for extra work involving existing utilities not shown on the Drawings or included in the Specifications but in direct physical conflict with Contractor's operations.

1. This extra work shall include the following costs:

a. Locating, supporting, working around, and protecting or repairing damage not due to the failure of Contractor to exercise reasonable care.

b. Removing and relocating, as directed by County, existing main or trunk line utility facilities located on site but not indicated on the Drawings and Specifications with reasonable accuracy.

c. Equipment on the project necessarily idled during such work.

E. Contractor shall not be entitled to any adjustment in the Contract Sum or Time if the existence of such condition:

1. Could have been reasonably discovered or revealed as a result of any examination, investigation, exploration, test or study of the site and contiguous areas required by the Contract Documents to be conducted by or for Contractor prior to commencing such work, or

2. Could have been inferred from the presence of other visible facilities, such as buildings, meter and junction boxes, on or adjacent to the work site.

PART 2 - PRODUCTS

NOT USED

PART 3 - EXECUTION

NOT USED

HIDDEN CONDITIONS REPORT (HCR)

Pre-Trial Release Program Facility HCR No. _____

Submitted By: _____ Date: _____

	Ctr to PM	PM to Arch	Arch to PM	PM to Ctr
Date Sent:	_____	_____	_____	_____
Date Received:	_____	_____	_____	_____

Type of Conditions Reported:

☐ Site Work ☐ Structural ☐ Architectural ☐ HVAC
☐ Plumbing ☐ Fire Protection ☐ Electrical ☐ Other

Location and Reference for Drawing: _____

Conditions Reported: _____

_____

_____

_____

_____

_____

_____

_____

Investigated By: _____ Firm: _____ Date: _____

☐ Check this box if the hidden condition reported is not hidden. Reply with location(s) where the information can be obtained.

Reply of Findings: _____

_____

_____

_____

_____

_____

By: _____ Firm: _____ Date: _____

The reply is a finding from the investigation. No change in the Contract Sum or Time is authorized. See Specifications Document 00811 for the timeliness of investigation.

END OF SECTION

SECTION 00 85 10

DRAWINGS INDEX

Title: Charging Parking Stalls Project

Issue Date: January 21, 2025

501 LOW GAP ROAD

Architectural

A1.1 OVERALL SITE PLANS

A1.2 EV CHARGING PARKING STRIPPING AND DETAILS

Electrical

E-001 COVER SHEET

E-201 POWER PLAN

E-401 SINGLE LINE DIAGRAM

E-501 EQUIPMENT & ELEC. DETAILS

E-601 TITLE 24 FORMS

727 SOUTH STATE STREET

Architectural

A1.1 OVERALL SITE PLAN

A1.2 EV CHARGING PARKING STRIPING PLAN

A1.3 EV CHARGING, STIPING AND DETAILS

Electrical

E-001 COVER SHEET

E-201 POWER PLAN

E-401 SINGLE LINE DIAGRAM

E-501 EQUIPMENT & ELEC. DETAILS

E-601 TITLE 24 FORMS

END OF SECTION

SECTION 01 01 00

SUMMARY OF WORK

PART 1 - GENERAL

1.1 SUMMARY

A. General Conditions and Division 1 - General Requirements apply to the Work of all Sections.

B. Contractor is hereby specifically directed to notify and apprise all subcontractors and other parties engaged in the Work as to the Contents of the General Conditions and Division 1 - General Requirements.

1.2 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work shall be performed at a Project sites located in Mendocino County at 501 Low Gap Road and 727 South State Street in Ukiah, CA 95482

B. The Work of this Contract comprises the installation of Electric Vehicle Charging Parking Stalls per the project plans and specifications.

Scope of Work shall include but not be limited to:

1. Provide all labor, materials, and equipment to install Electric Vehicle Parking Stalls indicated on plans at two locations for a total of 24 Stalls. Work consists of saw cutting and demolition of concrete and asphalt, trenching and installation of conduit, installation of electrical panels, charging units, transformers and wiring, form work, concrete pads, installation of handicap signage, and parking lot striping.

2. The contractor shall provide a proposed work schedule within two (2) weeks of receipt of the fully executed contract and no later than two (2) weeks prior to the proposed start of the work. Upon acceptance of the proposed work schedule, the County shall issue the Notice to Proceed for the date proposed by the Contractor for the start of the work.

3. Work shall be completed no more than one hundred twenty (120) calendar days after the Notice to Proceed date.

4. Provide all labor, material, and equipment to complete work as depicted in the drawings, as described in the project manual or as necessary for a complete and proper installation. The extent of the work as indicated in the Drawings and as described in the Specifications shall include all that may be reasonably inferred to be required for proper execution or installation of work. Present to the County, at the close of project, signed copies of all required permits indicating successful completion of all permit requirements.

5. Should the General Conditions or Contract Documents contradict themselves, Contractor shall provide the more stringent or higher quality or quantity unless otherwise approved by County.

6. The Drawings shall be recognized as diagrammatic in nature and not completely descriptive of all requirements for construction. Whatever work may be specified, and not drawn, or drawn and not specified, is to be executed as fully as if described in both these ways; and should any workmanship or material be necessary which is not either directly or indirectly noted in these specifications, or shown on the Drawings, but is nevertheless necessary for the purpose of properly carrying out the obvious intention thereof, Contractor is to understand the same to be implied, and is to provide for the same in its bid, as fully as if it were particularly described or delineated.

1.3 TYPE OF CONTRACT

A. Contractor shall construct the Work under a single fixed-price Contract.

1. Where the term "Contractor" is used in the Specification, the General Contractor is referred to.

2. Where the terms "Plumbing Contractor," "Electrical Contractor," etc., are used, it has been for convenience only and in no way affects the overall responsibility of the General Contractor.

1.4 PRECEDENCE OF DOCUMENTS

A. In the case of discrepancy or ambiguity in the Contract Documents the following order of precedence shall prevail:

1. Modifications in inverse chronological order and in alphanumeric order.

2. Signed Agreement and terms and conditions referenced in the Signed Agreement.

3. Supplemental Conditions.

4. General Conditions.

5. Division 1 specifications.

6. Drawings and Division 2 through 16 specifications.

7. Written numbers and figures, unless obviously incorrect.

8. Figured dimensions over scaled dimensions.

9. Large format drawings over small-scale drawings.

B. Any conflict between the Drawings and Division 2 through 16 specifications will be resolved in favor of the document of the latest date (i.e., the most recent document), and if the dates are not the same or are not determinable, then in favor of the specifications.

C. Any conflict between a bill or list of materials shown in the Contract Documents and the actual quantities required to complete the Work required, then the actual quantity shall take precedence.

1.5 USE OF PREMISES

A. General: Comply with requirements in General Conditions and Section 015000.

B. Area available for Contractor's use for work and storage, if any, is limited to the area designated by the County.

C. Work to be performed is within the existing county-owned parking stalls. The contractor shall ensure that no members of the public are within the designated work area prior to commencing each day and throughout the day.

D. Fire Department Access: Contractor's use of premises shall not limit required Fire Department access.

1.6 EXAMINATION

A. General: As stipulated in Document 001000, Contractor is responsible for inspection of the existing site conditions and bidding documents prior to bidding and shall include in their bid any modifications of the Contract Documents required as a result of Contractor's inspection.

B. Persons performing work shall examine conditions that affect their work and shall report in writing to Contractor, with a copy to County, conditions detrimental to work.

1. Failure to examine and report makes the person responsible, at no increase in the Contract Sum, for corrections necessary for the proper installation of their work.

2. Commencement of Work constitutes acceptance of existing conditions.

C. Field Verification: Contractor shall verify all existing conditions in the field prior to commencing the Work.

1.7 PERMITS FOR WORK

The Contractor is responsible for fulfilling all permit requirements for the completion of the work.

1.8 LISTING OF RELATED WORK

Listings of related work or sections in the various Sections are not necessarily complete listings. They are provided for information and convenience only and are intended to highlight related or similar work which is specified in other Sections. Related work listings and omissions from such listings are not intended to control Contractor in dividing the work among subcontractors or in establishing the extent of the work to be performed by any trade.

1.9 REQUEST FOR INFORMATION (RFI)

A. Requirement: It is Contractor's responsibility to review Contract Documents a minimum of Fifteen (15) days in advance of the work to be executed, and to request information so that County will have sufficient time to respond to Requests for Information prior to the start of actual construction of that part of the Work to which the RFI relates. The contractor shall be responsible for all delays, disruptions and other related impacts as a result of untimely RFI's submitted to County.

B. Contractor shall coordinate all requests for information to prevent duplication. Requests for information that are duplicative, uncoordinated with each other, or do not allow for a reasonable time for response will be returned to Contractor.

1. Contractor shall promptly notify County in writing of any discrepancies and shall not proceed with the Work until such discrepancies have been resolved.

2. Failure to notify County shall not relieve Contractor of its responsibility for resulting damage and/or defect, and for the cost of any corrective work that may be required due to Contractor's failure to notify.

C. Contractor shall prioritize RFI's and request a response based on its most current and accepted CPM schedule.

D. Form:

1. When an interpretation or clarification of the Contract Documents is required from County, Contractor shall make the request on a copy of the RFI form included in the end of this section.

2. Contractor shall fill in all applicable information on the form.

3. Contractor shall limit the subject to one design discipline to expedite reply and attach supplementary information where necessary.

4. County will reply or give summary of reply on the same form and include supplementary information where necessary.

5. The completed form shall be the written record of each RFI.

6. Contractor shall not use any other RFI form on this Project.

E. Uses:

1. The RFI form shall be used for interpretation or clarification of the Contract Documents only.

2. Contractor shall not use the RFI form for the following: County will not reply and will reject the RFI:

a. Product or material substitution.

b. Questions relating to construction means, methods, techniques, sequences, procedures or safety precautions. (These are Contractor's responsibilities exclusively.)

c. Questions relating to construction schedule, coordination between trades, or division of work among subcontractors. (These are also Contractor's responsibilities exclusively.)

d. Questions on contract administration procedural matters, unless they require interpretation or clarification of the Contract Documents.

e. Dimensions or quantities which are shown on the Contract Documents, or which can be measured from the building, or calculated from the information contained in the Contract Documents.

f. Confirmation of interpretations or clarifications previously provided by County.

F. Reply:

1. County will endeavor to reply to all RFI's promptly as work schedule of the consultants allows; generally, no later than fifteen (15) days from the day received.

2. When an RFI involves a complex subject, extensive research or development, or substantial input from other governmental agencies, County will inform the Contractor and request additional time to prepare the reply. The contractor shall cooperate and agree to a reasonable time extension.

3. The reply shall be a clarification or an interpretation of the Contract Documents; the reply is not an authorization of change in the Contract Sum or Time.

4. Such written interpretation or clarification will be binding on Contractor and County. If County or Contractor believes that a written interpretation or clarification justifies an adjustment in the Contract Sum or Time, then County or Contractor may make a written request for change therefor as provided in the General Conditions, Article 1.07.

PART 2 - PRODUCTS
NOT USED

PART 3 - EXECUTION
NOT USED

END OF SECTION

REQUEST FOR INFORMATION (RFI)

EV Charging Parking Stalls Project

RFI No. _____

Submitted By: _____ Date: _____

	Ctr to PM	*PM to Arch*	*Arch to PM*	*PM to Ctr*
Date Sent:	_____	_____	_____	_____
Date Received:	_____	_____	_____	_____

Type of Information Requested:

☐ Site Work ☐ Structural ☐ Architectural ☐ HVAC
☐ Plumbing ☐ Fire Protection ☐ Electrical ☐ Other

Spec. Section: _____ Paragraph(s): _____

Drawing Sheet: _____ Detail(s): _____

Information Requested: _____

_____

_____

_____

_____

μ Mark this circle if the RFI can be answered by Contractor's review of the documents. Reply with location(s) where the information can be obtained.

Reply: _____

_____

_____

_____

_____

_____

_____

By: _____ Firm: _____ Date: _____

The reply is a clarification or an interpretation of the Contract Documents. No change in the Contract Sum or Time is authorized. The Contractor shall notify the County in the event the Contractor believes the response to the RFI will result in additional costs. The Contractor shall comply with the requirements of Article 2.06 and 2.07 of the General Conditions regarding notice and submittal of an RFC. See Specification Section 01010 for the timeliness of reply.

SECTION 01 06 00

REGULATORY REQUIREMENTS

PART 1 – GENERAL

1.1 SUMMARY

A. Specific reference in the Specifications to codes and regulations or requirements of regulatory agencies shall mean the latest printed edition of each adopted by the regulatory agency at the date of advertisement for bid, unless the document is shown dated.

1.2 REGULATORY REQUIREMENTS

A. Contractor shall be responsible for contacting governing authorities directly for necessary information and decisions bearing upon performance of Work.

B. Perform the Work in conformance with the applicable requirements of all Federal, State, and local regulatory agencies and the following codes:

1. California Building Code (CBC), 2010 Edition.

2. California Electric Code (CEC), 2010 Edition, with State Building Code Amendments CCR Title 24, Part 3.

3. California Plumbing Code (CPC), 2010 Edition.

4. California Mechanical Code (CMC), 2010 Edition, with State Building Code Amendments CCR Title 24, Part 4.

5. California Fire Code (CFC), 2010 Edition.

6. National Fire Protection Association (NFPA).

7. California Occupational Safety and Health Administration (CalOSHA).

8. Occupational Safety and Health Administration (OSHA): Hazard Communications Standard.

9. Americans with Disabilities Act of 1990 (ADA) and as amended.

10. Others as applicable.

C. Unless otherwise indicated or specified, codes and regulations shall be those in effect at the date of application for permit and in effect at time of work of this Contract.

1.3 Charging Equipment

A. The following requirements apply to charging equipment in the proposed project:

1. All public chargers must meet applicable requirements, including those of Senate Bill 454 (Corbett, Chapter 418, Statutes of 2013), the California Air Resources Board Electric Vehicle Supply Equipment (EVSE) Standards, and the California Department of Food and Agriculture Division of Measurement Standards.

2. All public DC fast chargers must be networked.

3. A networked charger must include the following three abilities.

    a. Have network connectivity with one of the following:

        - IEEE 802.11n for high-bandwidth wireless networking, or
        - IEEE 802.3 for Ethernet for local- or wide-area network applications

    b. Be able to receive remote software updates, real-time protocol translation, encryption, and decryption, including:

        - Internet Protocol (IP)-based processors which must support multiple protocols, and
        - Compliance with Transmission Control Protocol (TCP)/IP and IPv6.

    c. Be able to connect to a network's back-end software

4. Grid-connected DC fast chargers must have a minimum charging rate of 50 kW.

5. For each DC fast charging site, at least 50% of the connectors must be SAE CCS standard. Tesla and CHAdeMO connectors are eligible.

6. DC fast charging sites must have at least one Level 2 charger with SAE standard J1772 connector.

7. At least 50% of the Level 2 connectors must be SAE standard J1772. Level 2 Tesla connectors are eligible.

8. Level 1 chargers are not required to have an attached cord and connector. If a Level 1 charger is equipped with an attached cord, the connector must be a SAE standard J1772 connector.

9. The equipment must be able to withstand extreme weather conditions associated with the deployment area, including extreme temperatures, heavy rain, and high winds.

10. Display screens must be protected from malfunctions due to condensation and any local area weather conditions.

1.4 Electric Vehicle Infrastructure Training Program (EVITP)

AB 841 (Ting, 2020) added Public Utilities Code (PUC) section 740.20, which requires Electric Vehicle Infrastructure Training Program (EVITP) certification to install electric vehicle charging infrastructure and equipment for work performed on or after January 1, 2022, subject to certain exceptions.

Therefore, applying PUC 740.20 EVITP requirements to this GFO means that all electric vehicle charging infrastructure and equipment located on the customer side of the electrical meter shall be installed by a contractor with the appropriate license classification, as determined by the Contractors' State License Board, and at least one electrician on each crew, at any given time, who holds an EVITP certification. Projects that include installation of a charging port supplying 25 kilowatts or more to a vehicle must have at least 25 percent of the total electricians working on the crew for the project, at any given time, who hold EVITP certification. One member of each crew may be both the contractor and an EVITP certified electrician. The requirements stated in this paragraph do not apply to any of the following:

1. Electric vehicle charging infrastructure installed by employees of an electrical corporation or local publicly owned electric utility.

2. Electric vehicle charging infrastructure funded by money derived from credits generated from the Low Carbon Fuel Standard Program (Sub article 7 (commencing with Section 95480) of Article 4 of Subchapter 10 of Chapter 1 of Division 3 of Title 17 of the California Code of Regulations).

3. Single-family home residential electric vehicle chargers that can use an existing 208/240-volt outlet.

PART 2 – PRODUCTS
NOT USED

PART 3 – EXECUTION
NOT USED

END OF SECTION

SECTION 01 21 00

ALLOWANCES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. The section includes administrative and procedural requirements governing allowances.

1. Certain items are specified in the Contract Documents by allowances. Allowances have been established in lieu of additional requirements to permit evaluation of existing conditions before defining the required scope for each allowance item and final direction that will be provided to Contractor. If necessary, additional requirements will be issued by Change Order.

B. Types of allowances include the following:

1. Lump-sum allowances.
2. Force account allowances.

C. Related Requirements:

1. Section 007000 "General Conditions" for Changes in Work
2. Section 008110 "Unforeseen Physical Conditions" for definition of hidden conditions.

1.3 SURVEY AND ASSESSMENT

A. Base bid includes all labor, materials, and equipment to demo, saw cut, trench, lay conduit, backfill, pour concrete, pull wire, install equipment and related work indicated on plans and required to complete the work. Prior to and during the Work, the Contractor shall coordinate observation of the condition of the proposed work with the Engineer and the County and provide notice to the County as required in Section 00 81 10 Unforeseen Physical Conditions.

B. In consultation with the Contractor and the Engineer, the County will determine the extent of additional work and provide directions to the contractor. Should additional work be required, the County will provide the Contractor with a Request for Proposal. The Contractor shall promptly provide a Lump Sum or Unit Cost Proposal in accordance with Section 007000 General Conditions, Chapter 20 – Changes in the Work.

C. In the event that a proposal is not authorized by the County, the County may direct the contractor to proceed with the authorized work by Force Account in accordance with Section 007000 – General Conditions, Chapter 20.

1.4 ACTION SUBMITTALS

A. Submit proposals for the work noted above.

B. Upon completion of identified repairs, submit revised Schedule of Values noting allowance amounts used.

1.5 INFORMATIONAL SUBMITTALS

A. Submit timecards, invoices or delivery slips to show actual labor time and quantities of materials delivered to the site for use in completing allowance work authorized under force account.

B. Coordinate and process submittals for allowance work items in same manner as for other portions of the Work.

1.6 COORDINATION

A. Coordinate allowance items with other portions of the Work.

1.7 ALLOWANCE ITEMS

A. Provide for each allowance item on the schedule of Values.

B. Use the allowances only as directed by the County for labor, materials, and equipment to resolve unforeseen conditions, by unit cost, lump sum price or force account authorized in writing by the owner.

C. At Project closeout, credit unused amounts remaining in the contingency allowance to Owner by Change Order.

1.8 ADJUSTMENT OF ALLOWANCES

A. Allowance Adjustment: To adjust allowance amounts, prepare a Change Order proposal based on the difference between the authorized cost of all repairs completed and the allowance amount.
   1. If requested, include the cost of lump sum proposals for the work performed.
   2. Submit substantiation of any force account work related to allowance work authorized in advance by the owner.

B. Submit Contract Change Order to refund the balance of the Allowance to the County or claims for increased costs for work performed on authorized work items that exceed the allowance amount included in the Contract Documents.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine existing conditions at the time work is to be performed to verify that the conditions are suitable for the work under the allowances. Immediately report all unsatisfactory conditions to the County.

3.2 PREPARATION

A. Submit and secure approval of all labor, materials, and equipment needed to address the unforeseen physical conditions.

3.3 SCHEDULE OF ALLOWANCES

A. Allowance No.1: Unforeseen Physical Conditions: Include the sum of $20,000 for labor, materials, and equipment to address unforeseen physical conditions that arise during performance of the work.
   1. This allowance includes labor, material, equipment costs and Contractor overhead and profit documented for either lump sum or force account work to address other unforeseen conditions.

END OF SECTION

SECTION 01 30 00
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Preconstruction meeting.

B. Progress meetings.

C. Change Order Documentation.

D. Project Record Documents.

E. Coordination drawings.

F. Submittals for review, information, and project closeout.

G. Submittal procedures.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

A. Architect or Owner will schedule a meeting after Notice of Award.

B. Attendance Required:
   1. Owner.
   2. Architect.
   3. Contractor.

C. Agenda: Agenda to be prepared by Contractor and distributed to all invited attendees.
   1. Execution of Owner- Contractor Agreement.
   2. Submission of executed bonds and insurance certificates.
   3. Distribution of Contract Documents.
   4. Submission of list of Subcontractors, list of Products, schedule of values, and progress schedule.
   5. Designation of personnel representing the parties to Contract, Owner, Contractor, and Architect.
   6. Project organizational structure and chain of command.
   7. Duties and expectations of the Owner, Architects, and Contractor.
   8. Project Scope of Work.
   9. Contract disputes, mediation, partnering, and resolution.
   10. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
   11. Construction Schedule.
   12. Work schedule, normal working hours, and normal work week. Also to include required notice for scheduling overtime, outages, and interruptions.
   13. Safety procedures.
   14. Temporary and permanent utilities.
   15. Security, keys, fencing, site access, and limited access to certain areas.
   16. Designated parking and delivery areas.
   17. Designated storage areas, bonded storage, and security.
   18. Designated toilets, break areas, vending areas, and smoking areas.

19. Daily cleanup, trash removal, dumpsters, and trash areas.
20. Procedures and responsibilities for testing and inspecting, required permits, and licenses.
21. Demolition items to be salvaged for Owner, notification, and storage area.
22. Preparation of Record Documents and operating and maintenance manuals.
23. Instruction and training of Owner's maintenance personnel. Warranties, manufacturer startup, prior to substantial completion.
24. Final completion inspection and punch list.
25. One-year warranty inspection (Architect to inspect 10 months after substantial completion.)
26. Contractor corrections for items found during the warranty inspection.

D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

A. The Contractor shall schedule and administer meetings throughout progress of the Work at maximum bi-monthly intervals.

B. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.

C. Attendance Required: Contractor's project manager, Job superintendent, major Subcontractors and suppliers, Owner, Architect, as appropriate to agenda topics for each meeting.

D. Agenda:
1. Review minutes of previous meetings.
2. Review of Work progress.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of off-site fabrication and delivery schedules.
7. Maintenance of progress schedule.
8. Corrective measures to regain projected schedules.
9. Planned progress during succeeding work period.
10. Coordination of projected progress.
11. Maintenance of quality and work standards.
12. Effect of proposed changes on progress schedule and coordination.
13. Other business relating to Work.

E. Record minutes and distribute copies within three days after meeting to participants, with copies to Architect, Owner, participants, and those affected by decisions made.

3.03 CHANGE ORDER DOCUMENTATION

A. Submittals for all change orders shall be documented using the procedures outlined in the General Conditions of the Contract.

3.04 PROJECT RECORD DOCUMENTS

A. Record Prints: Maintain one set of prints of the Contract Drawings and Shop Drawings. Mark prints to show actual installation where installation varies from those shown originally.
   1. Cross reference changes on Contract Drawings and Shop Drawings, noting construction change directive numbers, change order numbers, and similar identification where applicable.
   2. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.
   3. Organize into unbound sets. Place record prints in durable tube-type drawing containers with end caps. Mark end cap of each container with identification. If container does not include a complete set, identify Drawings included.

B. Record Specifications: Mark Specifications to indicate actual product installation where installation varies from that indicated in Specifications, addenda, and contract modifications. Note related Change Orders, Record Product Data, and Record Drawings where applicable. Record Product Data: Mark Product Data to indicate the actual product installation where installation varies substantially from that indicated in Product Data submittal. Note related Change Orders, Record Specifications, and Record Drawings where applicable.

3.05 COORDINATION DRAWINGS

A. Provide information required by Project Coordinator for preparation of coordination drawings.

B. Review drawings prior to submission to Architect.

3.06 SUBMITTALS FOR REVIEW

A. When the following are specified in individual sections, submit them for review:
   1. Product data.
   2. Shop drawings.
   3. Samples for selection.
   4. Samples for verification.

B. Submit to Architect for review for the limited purpose of checking for conformance with information given and the design concept expressed in the contract documents.

C. Samples will be reviewed only for aesthetic, color, or finish selection.

D. After review, provide copies and distribute in accordance with the SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - CLOSEOUT SUBMITTALS.

3.07 SUBMITTALS FOR INFORMATION

A. When the following are specified in individual sections, submit them for information:
   1. Design data.
   2. Certificates.
   3. Test reports.
   4. Inspection reports.
   5. Manufacturer's instructions.
   6. Manufacturer's field reports.
   7. Other types indicated.

B. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

A. When the following are specified in individual sections, submit them at project closeout:
   1. Project record documents.
   2. Operation and maintenance data.
   3. Warranties.
   4. Bonds.
   5. Other types as indicated.

B. Submit for Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

A. Documents for Review:
   1. Submit all documents in electronic PDF or Word format via e-mail or approved project management software.

B. Documents for Project Closeout: Provide digital close-out package in PDF format.

C. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
   1. After review, produce duplicates.
   2. Retained samples will not be returned to Contractor unless specifically so stated.

3.10 SUBMITTAL PROCEDURES

A. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.

B. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, as appropriate on each copy.

C. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of Products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with the requirements of the Work and Contract Documents.

D. Deliver submittals to Architect at business address.

E. Schedule submittals to expedite the Project, and coordinate submission of related items.

F. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.

G. Identify variations from Contract Documents and Product or system limitations that may be detrimental to successful performance of the completed Work.

H. Provide space for Contractor and Architect review stamps.

I. When revised for resubmission, identify all changes made since previous submission.

J. Distribute reviewed submittals as appropriate. Instruct parties to promptly report any inability to comply with requirements.

K. Submittals not requested will not be recognized or processed.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES & BUILDING SERVICES

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included: Provide temporary facilities and controls needed for the Work included, but not necessarily limited to:
   1. Temporary utilities such as water, electricity, lighting and telephone.
   2. Temporary building services such as electricity, gas, heating and cooling or telephone and data when interruption in services is required to complete the work.
   3. Sanitary facilities.
   4. Provide enclosures and temporary protection such as fencing, tarpaulins, barricades and canopies.

B. Related work:
   1. Documents affecting the work of this Section include, but are not necessarily limited to, Project Plans, General Conditions, Supplementary conditions, and Sections in Division 1 of these Specifications.

1.2 JOB SAFETY

A. Comply with all applicable laws and regulations pertaining to job safety, Contractor shall be solely responsible for construction means, methods, techniques, sequences procedures and safety precautions and programs in connection with the Work. Owner or Architect will not be responsible for Contractor's failure to employ proper safety procedures.

B. All work, including the temporary construction, shall be in full accord with the latest orders, rules and regulations of the State of California Division of Industrial Safety and the California Occupational Safety and Health Act (CAL-OSHA).

C. The Contractor shall at all times so conduct his work as to cause the least possible obstruction and inconvenience and insure the protection of persons and property in the vicinity of the Work.

PART 2 - PRODUCTS

2.1 MISCELLANEOUS FACILITIES

A. Construction Aids: Hoists, ramps and ladders, enclosures, pumps, barriers, fences, barricades necessary to adequately move materials and equipment and to protect workmen and public.

B. All temporary construction and protection to comply with requirements of state and local authorities.

C. Sanitary Facilities
1. Provide and pay for temporary sanitary facilities in quantity required for use by all personnel
2. Shall be maintained in a sanitary condition at all times.
3. Facility shall remain locked when Contractor is off-site.

D. Parking lots are shared with County of Mendocino staff, clients and the public.

PART 3 – EXECUTION

3.1 EXISTING BUILDING SERVICES

A. Utilities: Coordinate the temporary shut off of any utilities including water, electricity, gas, and sanitary sewer with the County. No utility will be made unavailable to buildings without written approval from the County.
1. Coordinate utility connections and transformer installation for each site with the City of Ukiah Electrical Services Department, Mendocino County Facilities and Fleet and the affected departments. Provide 72 hours written notice prior to utility service disconnection.

2. Coordinate all change over activities closely with County.

B. Provide a minimum of 48 hours' written notice to the County prior to any activities that may result in loss of water, firewater, sewer, gas, electrical or data connectivity.

C. Work in County public facilities:

1. Provide a minimum of 14-day notice before beginning work on the job site.
2. Provide clear delineation and appropriate barriers and signage to protect the public and county employees for the entirety of the project.
3. Do not leave materials, tools, equipment or debris unattended in any areas that are accessible to the public or county employees.
4. Remove all equipment, temporary facilities, debris and thoroughly clean all affected surfaces before removing barriers.

3.2 SECURITY

A. Contractor shall be responsible for securing the project Site and work areas within the job site including:

1. Secure and maintain access points to the Work.
2. Secure completed work.
3. Secure equipment and temporary facilities until time of acceptance.
4. Security and protection may be by any legal method, or methods, acceptable to the County.

3.3 MAINTENANCE AND REMOVAL

A. Maintain tree protection (except for the trees that require removal), erosion and sediment control measures, temporary facilities and controls as long as needed for safe and proper completion of the Work. Contractor shall be responsible for ensuring the effectiveness of erosion and sediment control devices, repairing, or replacing as necessary for the duration of the project.

B. Remove such temporary facilities and controls as rapidly as progress of the Work will permit or as directed by the County.

END OF SECTION

SECTION 34 60 13

ELECTRIC VEHICLE CHARGING STATIONS

PART 1 GENERAL

1.1 SECTION INCLUDES

A. Electric car charging stations, including the following:
   1. Manufacturer
   2. Execution

1.2 RELATED SECTIONS PROVIDED IN PROJECT DRAWINGS

A. Section 26 00 00 – General Electrical Requirements
B. Section 26 05 19 – Low-Voltage Electrical Power Conductors & Cables
C. Section 26 05 26 – Grounding & Bonding for Electrical Systems
D. Section 26 05 29 – Supports For Electrical Systems
E. Section 26 05 33 – Raceway & Boxes For Electrical Systems
F. Section 26 05 43 – Underground Duct & Raceways For Electrical Systems
G. System 26 05 48 – Vibrations & Seismic Controls For Electricals Systems
H. Section 26 05 53 – Identification For Electrical Systems
I. Section 26 24 13 – Switchboards

1.3 SUBMITTALS

A. Submit under provisions of Section 01 30 00 - Administrative Requirements.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

C. Shop Drawings: Indicate area layout, equipment locations, details of assembly and anchorage.

D. Operation and Maintenance Data: For the entire system.

1.4 QUALITY ASSURANCE

A. Manufacturer Qualifications: A company with not less than 5 years of experience in manufacturing components of the type required for this project.

B. Regulatory Requirements: Provide UL listed equipment and controls.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store products as recommended by the manufacturer until installation.

1.6 WARRANTY

A. Warranty: Provide manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. County Standard Manufacturer: ChargePoint, Inc., located at 240 East Hacienda Avenue; Campbell, CA 95008 USA.
Contact: Abe Guillen – Tel: 802-578-7254 or Dustin O'Brien – 408-872-7570
Web: www.chargepoint.com

1. **Substitutions: Not permitted**.

J. ChargePoint Equipment Provided by Contractor:

1. CP6021B-80A-L5.5
   a. CP6021, NA, AC Station, 2 x Type 1 Cable, 80A, 1-Phase, 18'. Cable, 6' Cable Management Kit, Pedestal Mount, 8" Touch Display, Contactless Credit Card and RFID Reader, Cellular, UL, Energy Star, Power Share Jumper, 2 YR Parts Warranty.
2. CP6011B-80A-L5.5
   a. CP6011, NA, AC Station, 1 x Type 1 Cable, 80A, 1-Phase, 18' Cable, 6' Cable Management Kit, Pedestal Mount, 8" Touch Display, Contactless Credit Card and RFID Reader, Cellular, UL, Power Share Jumper, 2 YR Parts Warranty.
3. CP6000-CMT-NA
   a. CP6000 Concrete Mounting Template, NA.

C. ChargePoint Products Provided by the County:

1. CPCLD-COMMERCIAL-1
   a. Prepaid Commercial Cloud Plan subscription with station management features.

2. CP6000-ASSURE-1
    a. 1 prepaid year of ChargePoint Assure for CP6000 stations. Includes Parts and Labor Warranty, Remote Technical Support, On-Site Repairs when needed, Unlimited Configuration Changes, and Reporting.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that required utilities are properly sized and in correct locations.

B. Verify that substrates are in proper condition to receive work of this section. Do not begin installation until substrates have been properly prepared.

C. If substrate preparation is the responsibility of another installer, notify the Architect of unsatisfactory preparation before proceeding

3.2 INSTALLATION

A. Install units and accessories in accordance with approved shop drawings and manufacturer's printed instructions. Test for proper operation. Install in proper relationship with adjacent construction.

3.3 CLEANING AND PROTECTION

A. Clean soiled surfaces in accordance with the manufacturer’s instructions.

B. Protect components from damage until completion of project.

C. Touch-up, repair or replace damaged products after Substantial Completion

See Attached ChargePoint AC Commercial Station Specifications and Ordering Information.

END OF SECTION

ChargePoint ® AC Commercial Station

Specifications and Ordering Information

Dual port, pedestal mount, 18 ft cable

Ordering Information

The order codes below represent specific product configurations. Please contact ChargePoint Sales for additional information. Specify model number followed by the applicable code(s).

The order code sequence is Model-Options. Software, Services and Other are ordered as separate line items.

Please note that charging stations without EMV-CHIP readers in California may not be publicly visible or discoverable on the ChargePoint map. Please see below for applicable dates.

- Level 2 (AC) stations without EMV-Chip readers: installed/activated on/after July 1, 2023.
- Direct Current Fast Charging (DCFC) stations without EMV-Chip readers: installed/activated on/after January 1, 2022.

(Reference: 13 CCR § 2360.2. Payment Method Requirements for Electric Vehicle Supply Equipment)

Hardware

Description		Order Code
Model	80A Dual port, pedestal mount, 18 ft cable	CP6021B-80A-L5.5
	80A Single port, pedestal mount, 18 ft cable	CP6011B-80A-L5.5
	80A Dual port, pedestal mount, 18 ft cable, EMV chip reader	CP6021B-80A-L5.5-CHIP
	80A Single port, pedestal mount, 18 ft cable, EMV chip reader	CP6011B-80A-L5.5-CHIP
	50A Dual port, pedestal mount, 18 ft cable	CP6021B-50A-L5.5
	50A Single port, pedestal mount, 18 ft cable	CP6011B-50A-L5.5
	50A Dual port, pedestal mount, 18 ft cable, EMV chip reader	CP6021B-50A-L5.5-CHIP
	50A Single port, pedestal mount, 18 ft cable, EMV chip reader	CP6011B-50A-L5.5-CHIP
	80A Dual port, wall mount, 18 ft cable	CP6023B-80A-L5.5
	80A Single port, wall mount, 18 ft cable	CP6013B-80A-L5.5
	80A Dual port, wall mount, 18 ft cable, EMV chip reader	CP6023B-80A-L5.5-CHIP
	80A Single port, wall mount, 18 ft cable, EMV chip reader	CP6013B-80A-L5.5-CHIP
	50A Dual port, wall mount, 18 ft cable	CP6023B-50A-L5.5
	50A Single port, wall mount, 18 ft cable	CP6013B-50A-L5.5
	50A Dual port, wall mount, 18 ft cable, EMV chip reader	CP6023B-50A-L5.5-CHIP
	50A Single port, wall mount, 18 ft cable, EMV chip reader	CP6013B-50A-L5.5-CHIP
	80A Dual port, pedestal mount, 23 ft cable	CP6021B-80A-L7
	80A Single port, pedestal mount, 23 ft cable	CP6011B-80A-L7

	80A Dual port, pedestal mount, 23 ft cable, EMV chip reader	CP6021B-80A-L7-CHIP
	80A Single port, pedestal mount, 23 ft cable, EMV chip reader	CP6011B-80A-L7-CHIP
	50A Dual port, pedestal mount, 23 ft cable	CP6021B-50A-L7
	50A Single port, pedestal mount, 23 ft cable	CP6011B-50A-L7
	50A Dual port, pedestal mount, 23 ft cable, EMV chip reader	CP6021B-50A-L7-CHIP
	50A Single port, pedestal mount, 23 ft cable, EMV chip reader	CP6011B-50A-L7-CHIP
	80A Dual port, wall mount, 23 ft cable	CP6023B-80A-L7
	80A Single port, wall mount, 23 ft cable	CP6013B-80A-L7
	80A Dual port, wall mount, 23 ft cable, EMV chip reader	CP6023B-80A-L7-CHIP
	80A Single port, wall mount, 23 ft cable, EMV chip reader	CP6013B-80A-L7-CHIP
	50A Dual port, wall mount, 23 ft cable	CP6023B-50A-L7
	50A Single port, wall mount, 23 ft cable	CP6013B-50A-L7
	50A Dual port, wall mount, 23 ft cable, EMV chip reader	CP6023B-50A-L7-CHIP
	50A Single port, wall mount, 23 ft cable, EMV chip reader	CP6013B-50A-L7-CHIP
Other	Bollard Concrete Mounting Kit	CP6K-CMT-NA

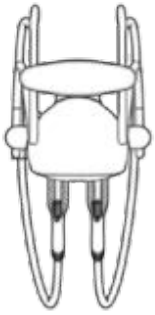
Software and Services

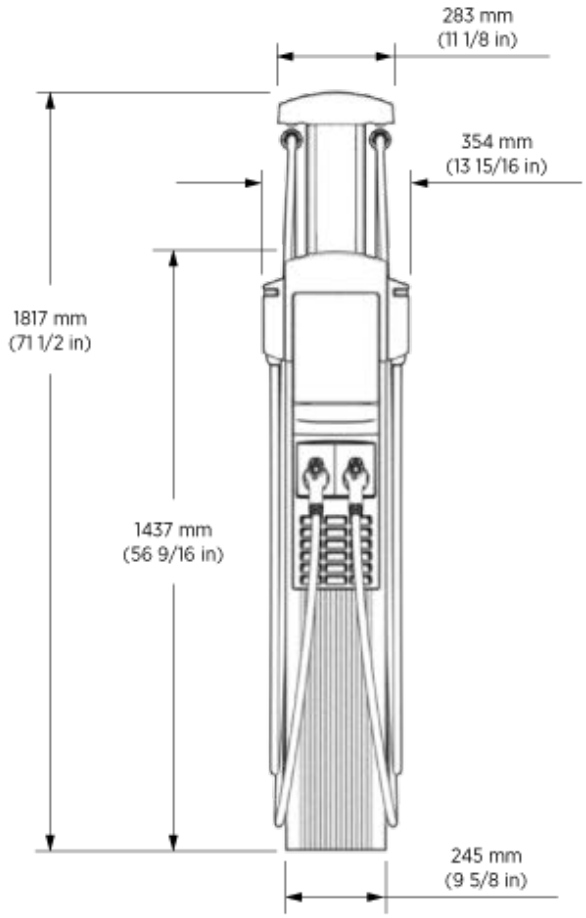
Description	Order Code
ChargePoint Enterprise Plan	CPCLD-ENTERPRISE-*n**
ChargePoint Fleet Commercial	CPCLD-COMMERCIAL-*n**
ChargePoint Assure	CP6000-ASSURE-n*
Station Activation and Configuration	CPSUPPORT-ACTIVE
ChargePoint Site Validation	CPSUPPORT-SITEVALID
ChargePoint Installation and Validation	CP6000-INSTALLVALID

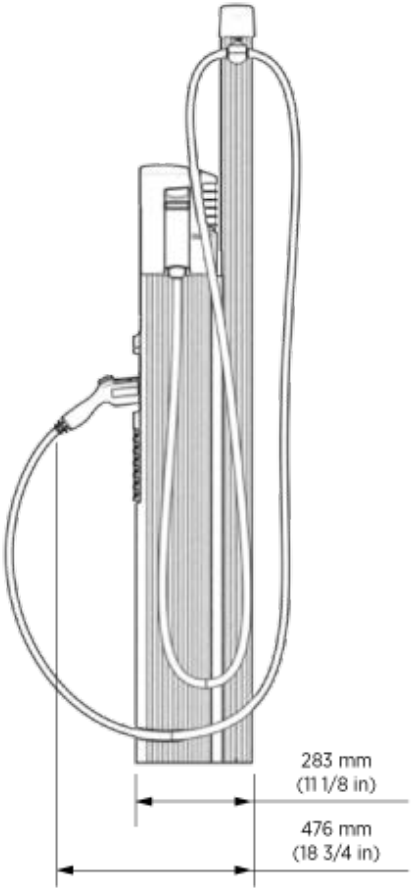
Note: All CP6000 stations require a network service plan per port.
*Substitute *n* for desired years (1, 2, 3, 4 or 5 years)

Architectural Drawings and Dimensions

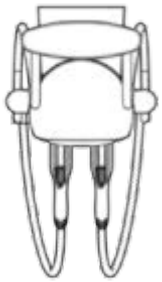
Pedestal Mount

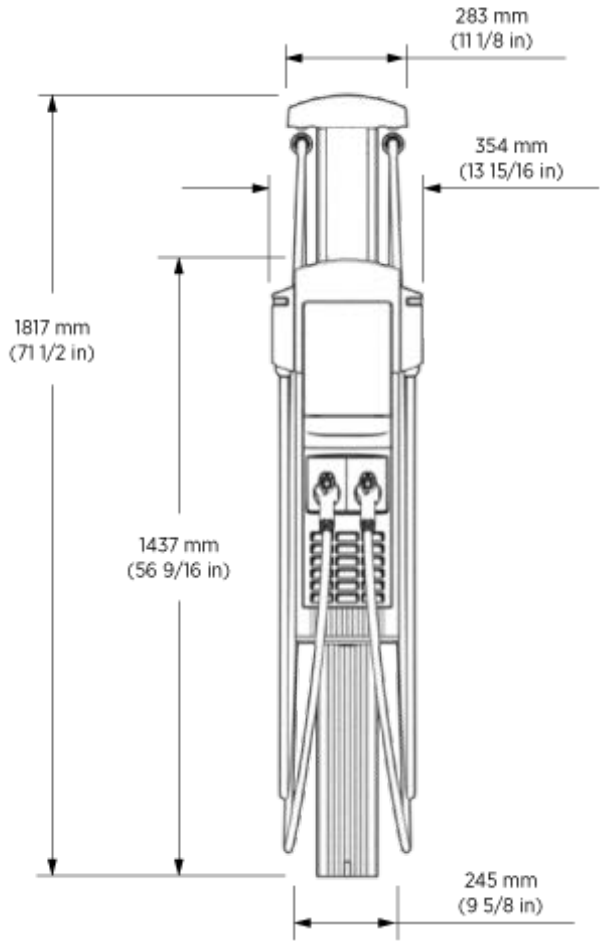


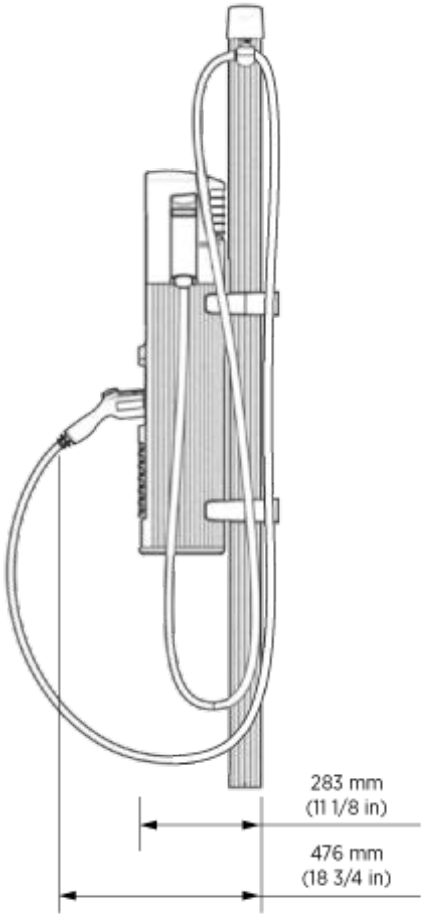




Wall Mount




283 mm
(11 1/8 in)
354 mm
(13 15/16 in)
1817 mm
(71 1/2 in)
1437 mm
(56 9/16 in)
245 mm
(9 5/8 in)


283 mm
(11 1/8 in)
476 mm
(18 3/4 in)

General Specifications

Electrical Input

The CP6000 AC Commercial Station supports flexible electrical input/output settings up to 80A to fit your fueling needs, whether for a workplace, multi-family dwelling, or other application.

Power Select allows stations to be installed and configured for current lower than the maximum 80A. Power Select current options include 16A, 24A, 32A, 40A, 48A, 50A, 56A, 64A, and 72A.

Power Share allows a dual-port station to share power from a single circuit across two ports, adjusting power depending on whether one or both are charging. Standard wiring uses an independent circuit for each port. Power Share can be used in combination with Power Select.

Station	Electrical Input	Single Port (AC Voltage 208 / 240V AC)			Dual Port (AC Voltage 208 / 240V AC)		
		Input Current	Input Power Connection	Required Service Panel Breaker	Input Current	Input Power Connection	Required Service Panel Breaker
80A	Maximum 80A (Standard)	80A	One 100A branch circuit	100A dual pole (non-GFCI)	80A x 2	Two independent 100A branch circuits	100A dual pole (non GFCI) x 2
	Maximum 80A (Power Share*)	N/A	N/A	N/A	80A	One 100A branch circuit	100A dual pole (non GFCI)
	Power Select** 16A - 72A (Standard)	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A)	16A - 72A x 2	Two independent branch circuits rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input current (20A - 90A) x 2
	Power Select 16A - 72A (Power Share)	N/A	N/A	N/A	16A - 72A	One branch circuit rated 125% of input current (20A - 90A)	Dual pole (non-GFCI) rated 125% of input

							current (20A - 90A)
50A	Maximum 50A (Standard)	50A	One 70A branch circuit	70A dual pole (non-GFCI)	50A x 2	Two independent 70A branch circuits	70A dual pole (non GFCI) x 2
	Maximum 50A (Power Share*)	N/A	N/A	N/A	80A	One 70A branch circuit	70A dual pole (non GFCI)
	Power Select** 16A - 48A (Standard)	16A - 48A	One branch circuit rated 125% of input current (20A - 60A)	Dual pole (non-GFCI) rated 125% of input current (20A-60A)	16A - 48A x 2	Two independent branch circuits rated 125% of input current (20A - 60A)	Dual pole (non-GFCI) rated 125% of input current (20A - 60A) x 2
	Power Select 16A - 48A (Power Share)	N/A	N/A	N/A	16A - 48A	One branch circuit rated 125% of input current (20A - 60A)	Dual pole (non-GFCI) rated 125% of input current (20A - 60A)
Service Panel/Breaker GFCI	Do not provide external GFCI as it may conflict with internal GFCI (CCID)						
Wiring – Standard	3-wire (L1, L2, Earth) No neutral				5-wire (L1, L1, L2, L2, Earth)		
Wiring – Power Share	N/A				3-wire (L1, L2, Earth)		
Station Power	8 W typical (standby), 15 W maximum (operation)						
Line to Ground Voltage	120V +/- 10%						

Electrical Output for 80A Station

Electrical Output	Single Port (AC Voltage 208 / 240V AC)	Dual Port (AC Voltage 208 / 240V AC)
Maximum 80A (Standard)	19.2 kW (240V AC @ 80A)	19.2 kW (240V AC @ 80A)
Maximum 80A (Power Share)	N/A	19.2 kW (240V AC @ 80A) x 1 or 9.6 kW (240V AC @ 40A) x 2
Power Select 16A - 72A (Standard)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A)	3.8 kW - 17.3 kW (240V AC @ 16A - 72A) x 2

Power Select 16A - 72A (Power Share)	N/A	3.8 kW - 17.3 kW (240V AC @ 16A - 72A) x 1 or 1.9 kW - 8.6 kW (240V AC @ 8A - 36A) x 2

Electrical Output for 50A Station

Electrical Output	Single Port (AC Voltage 208 / 240V AC)	Dual Port (AC Voltage 208 / 240V AC)
Maximum 50A (Standard)	12.0 kW (240V AC @ 50A)	12.0 kW (240V AC @ 50A)
Maximum 50A (Power Share)	N/A	12.0 kW (240V AC @ 50A) x 1 or 6.0 kW (240V AC @ 25A) x 2
Power Select 16A - 48A (Standard)	3.8 kW - 11.5 kW (240V AC @ 16A - 48A)	3.8 kW - 11.5 kW (240V AC @ 16A - 48A) x 2
Power Select 16A - 48A (Power Share)	N/A	3.8 kW - 11.5 kW (240V AC @ 16A - 48A) x 1 or 1.9 kW - 5.8 kW (240V AC @ 8A - 24A) x 2

Mounting and Functional Interfaces

Connector Type	SAE J1772™
Number of Ports	Single, dual
Mounting	Pedestal, wall
Cable Length	18 ft (5.5 m), 23 ft (7m)
Cable Management	Yes
Authentication and Payment	RFID: ISO 15693, ISO 14443, NEMA EVSE 1.2-2015 (UR) NFC (Tap to Charge) Remote: mobile and in vehicle (if supported by vehicle) Contactless credit card EMV chip credit card (for -CHIP models only)
Locking Holster	Yes
ISO 15118 Protocol	Supported by hardware
Display	Full color 8-inch interactive display with full motion video, UV protection, gesture touch controls, and multi-language support

Safety and Connectivity Features

Ground Fault Detection	20 mA CCID with auto retry
Open Safety Ground Detection	Continuously monitors presence of safety (green wire) ground connection
Plug-Out Detection	Power terminated per SAE J1772™ specifications
Energy Measurement	Meter accuracy 1% Accuracy class 2.0 Acceptance tolerance 1.0%
Power Report/Store Interval	15-minute interval aligned to hour. Responsive to load management signals.
Local Area Network	Wi-Fi 2.4 GHz and 5GHz (802.11 a/n/b/g)
Wide Area Network	LTE Category 4
Network Communication Protocol	OCPP 2.0.1
Ethernet connection	Capable with accessory

Safety and Operational Ratings

Station Enclosure Rating	Type 3R per UL 50E
Safety and Compliance	UL and cUL listed; complies with UL 2594, UL 2231-1, UL 2231-2, and NEC Article 625 Energy Star (Dual Port Only) CTEP

Station Surge Protection	6 kV @ 3,000A. In geographic areas subject to frequent thunderstorms, supplemental surge protection at the service panel is recommended.
EMC Compliance	FCC Part 15 Class B
Operating Temperature	-40°C to 50°C (-40°F to 122°F)
Non-Operating Temperature	-40°C to 60°C (-40°F to 140°F)
Terminal Block Temperature Rating	105°C (221°F)
Operating Humidity	Up to 85% @ 50°C (122°F) non-condensing
Non-Operating Humidity	Up to 95% @ 50°C (122°F) non-condensing

ChargePoint, Inc.
240 East Hacienda Avenue
Campbell, CA 95008-6617 USA

Contact Us
Visit chargepoint.com

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FORT BRAGG · CALIFORNIA · 95437

STEVE DUNNICLIFF, DIRECTOR
PHONE: 707-234-6650
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FB PHONE: 707-964-5379
FB FAX: 707-961-2427
pbs@co.mendocino.ca.us
www.co.mendocino.ca.us/planning

STATEMENT OF SPECIAL INSPECTIONS

SITE ADDRESS 501 Low Gap Road, Ukiah, 95482	**APN** 001-050-14-00	BP# TBD
Owner County of Mendocino Address 501 Low Gap Road City/St Ukiah / California Zip 95482 Phone (707)234-6068	Contractor TBD Address City/St Zip Phone	
Applicant Mendocino County, Facilities & Fleet Division Address 851 Low Gap Road City/St Ukiah / California Zip 95482 Phone 707-234-6058	Engineer/Architect 4 S.T.E.L. Engineering, Inc. Address 26030 Acero City/St Mission Viejo Zip 92691 Phone (949) 305-1150	
PROJECT DESCRIPTION: Project consists of the installation of (4) double EV chargers, and (2) single EV charger, the EV chargers will be installed on the west side of the property in the existing parking lot.		

This "STATEMENT OF SPECIAL INSPECTIONS" is submitted in fulfillment of the requirements of CBC Sections 1704 and 1705. This form is structured after and used by permission from the Structural Engineer Association of Northern California's (SEAONC) mode statement of Special Inspections. Also, included with this form is the following:

- ☒ "LIST OF SPECIAL INSPECTION AGENCIES (page 2). A list of testing agencies and other special inspectors that will be retained to conduct the tests and inspections for this project
- ☒ "SCHEDULE OF SPECIAL INSPECTION" (page 3 – 6). The Schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications shall also be performed.

Special Inspections and Testing will be performed in accordance with the approved plans and specifications, this statement and CBC Sections 1704, 1705, 1706, 1707, and 1708. Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with CBC Section 1704.1.2.

A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.1.2). The Final Report will document:

- Required special inspections.
- Correction of discrepancies noted in inspections.

The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner will retain and directly pay for the Special Inspections as required in CBC Section 1704.1.

This plan has been developed with the understanding that the Building Official will:

- Review and approve the qualifications of the Special Inspectors who will perform the inspections.
- Monitor special inspection activities on the job site to assure that the Special Inspectors are qualified and are performing their duties as called for in this Statement of Special Inspection.
- Review submitted inspection reports.
- Perform inspections as required by the local building code.

I have read and agree to comply with the terms and conditions of this statement

Prepared By: Project ☒ Engineer ☐ Architect Registered Design Professional in Charge	Signature [signature] Lic.# S 5885 Date: 09/27/2024
Owner Name: Owner's Authorization	Signature Doug Anderson Date: 9-25-2024
Inspection Agency / Inspector Name:	Signature Lic.# Date:
Building Official or designee:	Signature Date:

LIST OF SPECIAL INSPECTION AGENCIES

APPROVAL OF SPECIAL INSPECTORS:
Each special inspection agency, testing facility, and special inspector shall be recognized by the Building Official prior to performing any duties. Special Inspection agency's listed on this form must be pre-approved and listed on Mendocino County's approved Special Inspector's list. Special inspectors shall carry approved identification when performing the functions of a special inspector. Identification cards shall follow the criteria set by the California Council of Testing and Inspection Agencies. No personnel changes shall be made without first obtaining the approval of the Building Official. Any unauthorized personnel changes may result in a "Stop Work Order" and possible permit revocation. To be pre- approved by the County of Mendocino, refer to the SPECIAL INSPECTION CRITERIA handout. Please allow two weeks to complete the application process.

The following are the testing and special inspection agencies that will be retained to conduct tests and inspection on this project:

EXPERTISE	FIRM / INSPECTOR INFORMATION *
1. Special Inspection (except for geotechnical)	Firm SHN Addr 335 South Main Street City Willits State CA Zip 95490 Telephone (707) 495-4518 Fax (707) 495-1884 Email info@shn-engr.com
2. Material Testing	Firm SHN Addr 335 South Main Street City Willits State CA Zip 95490 Telephone (707) 495-4518 Fax (707) 495-1884 Email info@shn-engr.com
3. Geotechnical Inspections	Firm NA Addr City State Zip Telephone Fax Email
4. Other: _____	Firm NA Addr City State Zip Telephone Fax Email

*All agencies specified on this form must be pre-approved and listed on the County of Mendocino's Approved Special Inspector's List.

SEISMIC REQUIREMENTS (Section 1705.3.6)

Description of seismic-force-resisting system and designated seismic systems subject to special inspections as per Section 1705.3:

Not applicable.

The extent of the seismic-force-resisting system is defined in more detail in the construction documents.

WIND REQUIREMENTS (Section 1705.4.1)

Description of main wind-force-resisting system and designated wind resisting components subject to special inspections in accordance with Section 1705.4.2:

Not applicable.

The extent of the main wind-force-resisting system and wind resisting components is defined in more detail in the construction documents.

SCHEDULE OF SPECIAL INSPECTION

SITE ADDRESS	APN	BP#
501 Low Gap Road, Ukiah, 95482	001-050-14-00	

PROJECT DESCRIPTION: Project consists of the installation of (4) double EV chargers, and (2) single EV charger, the EV chargers will be installed on the west side of the property in the existing parking lot.

Notation Used in Table:

Column headers:

- C — Indicates continuous inspection is required.
- P — Indicates periodic inspections are required. The notes and/or contract documents should clarify.

Box entries:

- X — Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections.
- --- — Denotes an activity that is either a one-time activity or one whose frequency is defined in some other manner.

Additional detail regarding inspections and tests are provided in the project specifications or notes on the drawings.

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF FABRICATORS				
1. ☐ Inspect fabricator's fabrication and quality control procedures.	---	---		1704.3

INSPECTION OF STEEL				
1. Material verification of high-strength bolts, nuts and washers.				
☐ Identification marking to conform to ASTM stds specified in the approved construction documents.	---	X	AISC 360, Section A3.3 and applicable ASTM material standards	
☐ Inspect fabricator's fabrication and quality control procedures.	---	X	---	---
2. Inspection of high-strength bolting:				
☐ Snug-tight joints.	---	X	AISC 360, Section M2.5	1704.3.3
☐ Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation.	---	X		
☐ Pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation.	X	---		
3. Material verification of structural steel and cold-formed steel deck.				
☐ For structural steel, identification markings to conform to AISC 360.	---	X	AISC 360, Section M2.5	
☐ For other steel, identification markings to conform to ASTM standards specified in the approved construction documents.	---	X	Applicable ASTM material standards	
☐ Manufacturer's certified test reports.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
4. Material verification of weld filler materials:				
☐ Identification marking to conform to AWS specification in the approved construction documents.	---	X	AISC 360, Section A3.5 and applicable AWS A5 documents	---
☐ Manufacturer's certificate of compliance required.	---	X	---	---
5. Inspection of welding:				
a. Structural steel and cold-formed steel deck:				
☐ Complete and partial joint penetration groove welds.	X	---	AWS D1.1	1704.3.1
☐ Multipass fillet welds.	X	---		
☐ Single-pass fillet welds > 5/16"	X	---		
☐ Plug and slot welds.	X	---		
☐ Single-pass fillet welds <= 5/16"	---	X		
☐ Floor and roof deck welds.	---	X	AWS D1.3	
b. Reinforcing steel:				
☐ Verification of weldability of reinforcing steel other than ASTM A 706.	---	X	AWS D1.4 ACI 318: Section 3.5.2	---
☐ Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	X	---		
☐ Shear reinforcement.	X	---		
☐ Other reinforcing steel.	---	X		
6. Inspection of steel frame joints details for compliance:				
☐ Details such as bracing and stiffening.	---	X	---	1704.3.2
☐ Member locations.	---	X		
☐ Application of joint details at each connection.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF WELDING				
1. ☐ Welded studs when used for structural diaphragms.	---	X	---	1704.3
2. ☐ Welding of cold-formed steel framing members.	---	X		
3. ☐ Welding of stairs and railing systems.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF CONCRETE				
1. ☐ Inspection of reinforcing steel, including prestressing tendons and placement.	---	X	ACI 318: 3.5, 7.1-7.7	1913.4
2. ☐ Inspection of reinforcing steel welding in accordance with Table 1704.3 Item 5b.	---	---	AWS D1.4 ACI 318: 3.5.2	---
3. ☒ Inspection of bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used.	X	---	ACI 318: 8.1.3, 21.2.8	1911.5, 1912.1
4. ☒ Inspection of anchors installed in hardened concrete.	---	X	ACI 318:	1912.1
5. ☐ Verifying use of required design mix.	---	X	ACI 318:	1904.2.2,1913.2, 1913.3
6. ☐ At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.	X	---	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.10
7. ☐ Inspection of concrete and shotcrete placement for proper application techniques.	X	---	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
8. ☐ Inspection for maintenance of specified curing temperature and techniques.	---	X	ACI 318: 5.11-5.13	1913.9
9. Inspection of prestressed concrete:				
☐ Application of prestressing forces.	X	---	ACI 318: 18.20	---
☐ Grouting of bonded prestressing tendons in the seismic force-resisting system.	X	---	ACI 318: 18.18.4	
10. ☐ Erection of precast concrete members.	---	X	ACI 318: Ch. 16	---
11. ☐ Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	---	X	ACI 318: 6.2	---
12. ☐ Inspect formwork for shape, location, and dimensions of the concrete member being formed.	---	X	ACI 318: 6.6.1	---
13. ☒ Bolts Installed in Existing Masonry or Concrete				
☐ Direct tension testing of existing anchors.	---	X	See ICC ES Reports form special inspection requirements for proprietary products	
☐ Direct tension testing of new bolts.	---	X		
☒ Torque testing of new bolts.	---	X		
☐ Prequalification test for bolts and other types of anchors.	---	X		
14. ☐ Other:				

VERIFICATION AND INSPECTION	C	P	REFERENCE FOR CRITERIA		
			IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 402/ACI 530/ASCE 6
INSPECTION OF LEVEL 1 MASONRY					
1. ☐ Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	---	X	---	---	Art. 1.5
2. ☐ Verification of f'_m and f'_{AAC} prior to construction except where specifically exempted by this code.	---	X	---	---	Art. 1.4B
3. ☐ Verification of slump flow and VSI as delivered to the site for self consolidating grout.	X	---	---	---	Art. 1.5B.1.b.3
4. As masonry construction begins, the following shall be verified to ensure compliance:					
☐ Proportions of site-prepared mortar.	---	X	---	---	Art. 2.6A
☐ Construction of mortar joints.	---	X	---	---	Art.3.3B
☐ Location of reinforcement, connectors, prestressing tendons, and anchorages.	---	X	---	---	Art. 3.4, 3.6A
☐ Prestressing technique.	---	X	---	---	Art. 3.6B
☐ Grade and size of prestressing tendons and anchorages.	---	X	---	---	Art. 2.4B, 2.4H
5. During construction the inspection program shall verify:					
☐ Size and location of structural elements.	---	X	---	---	Art. 3.3F
☐ Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	---	X	---	Sec. 1.2.2(e), 1.16.1	---
☐ Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 2.4, 3.4
☐ Welding of reinforcing bars.	X	---	---		---
☐ Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).	---	X	Sec. 2104.3, 2104.4	---	Art. 1.8C, 1.8D
☐ Application and measurement of prestressing force.	X	---	---	---	Art. 3.6B
6. Prior to grouting the following shall be verified to ensure compliance:					
☐ Grout space is clean.	---	X	---	---	Art. 3.2D
☐ Placement of reinforcement and connectors and prestressing tendons and anchorages.	---	X	---	Sec. 1.3	Art. 3.4
☐ Proportions of site-prepared grout and prestressing grout for bonded tendons.	---	X	---	---	Art. 2.6B
☐ Construction of mortar joints.	---	X	---	---	Art. 3.3B
7. Grout placement:					
☐ Grout placement shall be verified ensure compliance.	X	---	---	---	Art. 3.5
☐ Observe grouting of prestressing bonded tendons.	X	---	---	---	Art 3.6C

VERIFICATION AND INSPECTION	C	P	REFERENCE FOR CRITERIA		
			IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 402/ACI 530/ASCE 6
8. ☐ Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	---	X	Sec. 2105.2.2, 2105.3	---	Art. 1.4
INSPECTION OF LEVEL 2 MASONRY					
1. ☐ Compliance with required inspection provisions of the construction documents and the approved submittals.	---	X	---	---	Art. 1.5
2. ☐ Verification of f'_m and f'_{AAC} prior to construction and for every 5,000 square feet during construction.	---	X	---	---	Art. 1.4B
3. ☐ Verification of proportions of materials in premixed or preblended mortar and grout as delivered to the site.	---	X	---	---	Art. 1.5B
4. ☐ Verification of slump flow and VSI as delivered to the site for self consolidating grout.	X	---	---	---	Art. 1.5B.1.b.3
5. The following shall be verified to ensure compliance:					
☐ Proportions of site-prepared mortar, grout, and prestressing grout for bonded tendons.	---	X	---	---	Art. 2.6A
☐ Placement of masonry units and construction of mortar joints.	---	X	---	---	Art. 3.3B
☐ Placement of reinforcement, connectors and prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 3.4, 3.6A
☐ Grout space prior to grouting.	X	---	---	---	Art. 3.2D
☐ Placement of grout.	X	---	---	---	Art. 3.5
☐ Placement of prestressing grout.	X	---	---	---	Art. 3.6C
☐ Size and location of structural elements.	---	X	---	---	Art. 3.3F
☐ Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames and other construction.	X	---	---	Sec.1.2.2(e)	---
☐ Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 2.4, 3.4
☐ Welding of reinforcing bars.	X	---	---	Sec. 2.1.9.7.2, 3.3.3.4 (b)	---
☐ Preparation, construction, and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).	---	X	Sec. 2104.3, 2104.4	---	Art. 1.8C, 1.8D
☐ Application and measurement of prestressing force.	X	---	---	---	Art. 3.6B
6. ☐ Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X	---	Sec. 2105.2.2, 2105.3	---	Art. 1.4

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF WOOD				
1. ☐ Inspect prefabricated wood structural elements and assemblies in accordance with Section 1704.2.	---	---	---	1704.6
2. ☐ Inspect site built assemblies.	---	---		
3. Inspect high-load diaphragms:				
☐ Verify grade and thickness of sheathing.	---	---	---	1704.6.1
☐ Verify nominal size of framing members at adjoining panel edges.	---	---		
☐ Verify nail or staple diameter and length,	---	---		
☐ Verify number of fastener lines,	---	---		
☐ Verify spacing between fasteners in each line and at edge margins.	---	---		
4. ☐ Metal-plate-connected wood trusses spanning 60 feet or greater: Verify temporary installation restraint/bracing and the permanent individual truss member bracing are installed in accordance with the approved truss submittal package.	---	X	---	1704.6.2
REQUIRED VERIFICATION AND INSPECTION OF SOIL				
1. ☐ Verify materials below footings are adequate to achieve the desired bearing capacity.	---	X	---	Table 1704.7
2. ☐ Verify excavations are extended to proper depth and have reached proper material.	---	X		
3. ☐ Perform classification and testing of compacted fill materials.	---	X		
4. ☐ Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	---		
5. ☐ Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	---	X		
REQUIRED VERIFICATION AND INSPECTION OF DEEP DRIVEN FOUNDATION ELEMENTS				
1. ☐ Verify element materials, sizes and lengths comply with the requirements.	X	---	---	Table 1704.8
2. ☐ Determine capacities of test elements and conduct additional load tests, as required.	X	---		
3. ☐ Observe driving operations and maintain complete and accurate records for each element.	X	---		
4. ☐ Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	---		
5. ☐ For steel elements, perform additional inspections in accordance with Section 1704.3.	---	---		
6. ☐ For concrete elements and concrete filled elements, perform additional inspections in accordance with Section 1704.4.	---	---		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
7. ☐ For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	---	---	---	Table 1704.8
REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS				
1 ☐ Observe drilling operations and maintain complete and accurate records for each element.	X	---	---	Table 1704.9
2. ☐ Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable), and adequate end-bearing strata capacity. Record concrete or grout volumes.	X	---		
3. ☐ For concrete elements, perform additional inspections in accordance with Section 1704.4.	---	---		
HELICAL PILE FOUNDATIONS				
1. ☐ Record installation equipment used, pile dimensions, tip elevations, final depth, final installation torque.	X	---	---	1704.10
SPRAYED FIRE-RESISTANT MATERIALS				
Physical and visual tests				
1. Condition of substrates.				
☐ Inspect surface for accordance with the approved fire-resistance design and the approved manufacturer's written instructions.	---	---	---	1704.12.1
☐ Verify minimum ambient temperature before and after application.	---	X		
☐ Verify ventilation of area during and after application.	---	X		
2. ☐ Measure average thickness per ASTM E605 and Section 1704.12.4.	---	---		
3. ☐ Verify density of material for conformance with the approved fire-resistant design and ASTM E605. (Ref. Section 1704.12.5)	---	---		
4. ☐ Test cohesive/adhesive bond strength per Section 1704.12.6.	---	---		
5. ☐ Condition of finished application.				
MISCELLANEOUS				
1. Mastic and Intumescent Fire-Resistant Coating.	---	---	---	1704.13
2. Exterior Insulation and Finish Systems (EIFS). Water-resistive barrier coating when installed over a sheathing substrate.	---	---	---	1704.14
3. Special Cases	---	---	---	1704.15
4. Smoke Control System	---	---	---	1704.16
5. Seismic Resistance				
☐ Suspended ceiling systems and their anchorage.	---	---	---	1705.3 [4.3]

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
6. Wind Resistance				
☐ Roof cladding and roof framing connections.	---	---	---	
☐ Wall connections to roof and floor diaphragms and framing.	---	---	---	
☐ Roof and floor diaphragm systems, including collectors, drag struts and boundary elements.	---	---	---	
☐ Vertical wind-force-resisting systems, including braced frames, moment frames, and shear walls.	---	---	---	
☐ Wind-force-resisting system connections to the foundation.	---	---	---	
☐ Fabrication and installation of systems or components required to meet the impact resistance requirements of Section 1609.1.2.	---	---	---	
SPECIAL INSPECTION FOR WIND REQUIREMENTS				
1. Structural Wood				
☐ Inspect field gluing operations of elements of the main wind-force-resisting system.	X	---	---	1706.2
☐ Inspect nailing, bolting, anchoring, and other fastening of components within the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces and hold-downs.	---	X		
2. Cold-Formed Steel Framing				
☐ Welding of elements of the main wind-force-resisting system.	---	X	---	1706.3
☐ Inspection of screw attachments, bolting, anchoring, and other fastening of components within the main wind-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.	---	X		
3. Wind-resisting components				
☐ Roof cladding.	---	X	---	1706.4
☐ Wall cladding.	---	X		
SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. ☐ Special inspection for welding in accordance with the quality assurance plan requirements of AISC 341.	X	---		1707.2
2. Structural Wood				
☐ Inspect field gluing operations of elements of the seismic-force-resisting system.	X	---		1707.3
☐ Inspect nailing, bolting, anchoring, and other fastening of components within the seismic-force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels and hold-downs.	---	X		
3. Cold-Formed steel light-frame construction				
☐ Welding of elements of the seismic-force-resisting system.	---	X		1707.4

☐	Inspection of screw attachments, bolting, anchoring, and other fastening of components within the seismic-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.	---	X		
4.	Storage racks and access floors				
☐	Anchorage of storage racks 8 feet or greater in height and access floors.	---	X		1707.5
5.	Architectural components				
☐	Inspect erection and fastening of exterior cladding weighing more than 5 psf and higher than 30 feet above grade or walking surface.	---	X	---	1707.6
☐	Inspect erection and fastening of veneer weighing more than 5 psf.and higher than 30 feet above grade or walking surface.	---	X		
☐	Inspect erection and fastening of all exterior non-bearing walls higher than 30 feet above grade or walking surface.	---	X		
☐	Inspect erection and fastening of all interior non-bearing walls weighing more than 15 psf and higher than 30 feet above grade or walking surface.	---	X		
6.	Mechanical and Electrical Components				
☐	Inspect anchorage of electrical equipment for emergency or stand-by power systems.	---	X	---	1707.7
☐	Inspect anchorage of non-emergency electrical equipment.	---	X		
☐	Inspect installation of piping systems and associated mechanical units carrying flammable, combustible, or highly toxic contents.	---	X		
☐	Inspect installation of HVAC ductwork that contains hazardous materials.	---	X		
☐	Inspect installation of vibration isolation systems where required by Section 1707.7.	---	X		
7. ☐	Verify that the equipment label and anchorage or mounting conforms to the certificate of compliance when mechanical and electrical equipment must be seismically qualified.	---	---	---	1707.8
8. ☐	Seismic isolation system: Inspection of isolation system per ASCE 7 – Section 17.2.4.8	---	X	---	1707.9
9. ☐	Obtain mill certificates for reinforcing steel, verify compliance with approved construction documents, and verify steel supplied corresponds to certificate.	---	---	---	1708.2
10. ☐	Structural Steel: Invoke the QAP Quality Assurance requirements in AISC 341.	---	---	---	1708.3
11. ☐	Obtain certificate that equipment has been seismically qualified.	---	---	---	1708.4
12. ☐	Obtain system tests as required by ASCE 7 Section 17.8.	---	---	---	1708.5

COUNTY OF MENDOCINO
DEPARTMENT OF PLANNING AND BUILDING SERVICES
860 NORTH BUSH STREET · UKIAH · CALIFORNIA · 95482
120 WEST FIR STREET · FORT BRAGG · CALIFORNIA · 95437

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STATEMENT OF SPECIAL INSPECTIONS

SITE ADDRESS 727 South State Street, Ukiah, 95482	**APN** 003-040-61-00	BP# TBD
Owner County of Mendocino Address 501 Low Gap Road City/St Ukiah / California Zip 95482 Phone (707)234-6068	Contractor TBD Address City/St Zip Phone	
Applicant Mendocino County, Facilities & Fleet Division Address 851 Low Gap Road City/St Ukiah / California Zip 95482 Phone 707-234-6058	Engineer/Architect 4 S.T.E.L. Engineering, Inc. Address 26030 Acero City/St Mission Viejo Zip 92691 Phone (949) 305-1150	
PROJECT DESCRIPTION: Project consists of the installation of (6) double EV chargers, and (2) single EV charger, the EV chargers will be installed on the west side of the property in the existing parking lot.		

This "STATEMENT OF SPECIAL INSPECTIONS" is submitted in fulfillment of the requirements of CBC Sections 1704 and 1705. This form is structured after and used by permission from the Structural Engineer Association of Northern California's (SEAONC) mode statement of Special Inspections. Also, included with this form is the following:

- ☒ "LIST OF SPECIAL INSPECTION AGENCIES (page 2). A list of testing agencies and other special inspectors that will be retained to conduct the tests and inspections for this project
- ☒ "SCHEDULE OF SPECIAL INSPECTION" (page 3 – 6). The Schedule of Special Inspections summarizes the Special Inspections and tests required. Special Inspectors will refer to the approved plans and specifications for detailed special inspection requirements. Any additional tests and inspections required by the approved plans and specifications shall also be performed.

Special Inspections and Testing will be performed in accordance with the approved plans and specifications, this statement and CBC Sections 1704, 1705, 1706, 1707, and 1708. Interim reports will be submitted to the Building Official and the Registered Design Professional in Responsible Charge in accordance with CBC Section 1704.1.2.

A Final Report of Special Inspections documenting required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy (Section 1704.1.2). The Final Report will document:

- Required special inspections.
- Correction of discrepancies noted in inspections.

The Owner recognizes his or her obligation to ensure that the construction complies with the approved permit documents and to implement this program of special inspections. In partial fulfillment of these obligations, the Owner will retain and directly pay for the Special Inspections as required in CBC Section 1704.1.

This plan has been developed with the understanding that the Building Official will:

- Review and approve the qualifications of the Special Inspectors who will perform the inspections.
- Monitor special inspection activities on the job site to assure that the Special Inspectors are qualified and are performing their duties as called for in this Statement of Special Inspection.
- Review submitted inspection reports.
- Perform inspections as required by the local building code.

I have read and agree to comply with the terms and conditions of this statement

Prepared By: Project ☒ Engineer ☐ Architect Registered Design Professional in Charge	Signature Lic.# S 5885 Date: 09/27/2024
Owner Name: Owner's Authorization	Signature Doug Anderson Date: 09/25/2024
Inspection Agency / Inspector Name:	Signature Lic.# Date:
Building Official or designee:	Signature Date:

LIST OF SPECIAL INSPECTION AGENCIES

APPROVAL OF SPECIAL INSPECTORS:
Each special inspection agency, testing facility, and special inspector shall be recognized by the Building Official prior to performing any duties. Special Inspection agency's listed on this form must be pre-approved and listed on Mendocino County's approved Special Inspector's list. Special inspectors shall carry approved identification when performing the functions of a special inspector. Identification cards shall follow the criteria set by the California Council of Testing and Inspection Agencies. No personnel changes shall be made without first obtaining the approval of the Building Official. Any unauthorized personnel changes may result in a "Stop Work Order" and possible permit revocation. To be pre- approved by the County of Mendocino, refer to the SPECIAL INSPECTION CRITERIA handout. Please allow two weeks to complete the application process.

The following are the testing and special inspection agencies that will be retained to conduct tests and inspection on this project:

EXPERTISE	FIRM / INSPECTOR INFORMATION *
1. Special Inspection (except for geotechnical)	Firm SHN Addr 335 South Main Street City Willits State CA Zip 95490 Telephone (707) 495-4518 Fax (707) 495-1884 Email info@shn-engr.com
2. Material Testing	Firm SHN Addr 335 South Main Street City Willits State CA Zip 95490 Telephone (707) 495-4518 Fax (707) 495-1884 Email info@shn-engr.com
3. Geotechnical Inspections	Firm NA Addr City State Zip Telephone Fax Email
4. Other: _____	Firm NA Addr City State Zip Telephone Fax Email

*All agencies specified on this form must be pre-approved and listed on the County of Mendocino's Approved Special Inspector's List.

SEISMIC REQUIREMENTS (Section 1705.3.6)

Description of seismic-force-resisting system and designated seismic systems subject to special inspections as per Section 1705.3:

Not applicable.

The extent of the seismic-force-resisting system is defined in more detail in the construction documents.

WIND REQUIREMENTS (Section 1705.4.1)

Description of main wind-force-resisting system and designated wind resisting components subject to special inspections in accordance with Section 1705.4.2:

Not applicable.

The extent of the main wind-force-resisting system and wind resisting components is defined in more detail in the construction documents.

SCHEDULE OF SPECIAL INSPECTION

SITE ADDRESS	727 South State Street, Ukiah, 95482	APN	003-040-61-00	BP#
PROJECT DESCRIPTION:	Project consists of the installation of (6) double EV chargers, and (2) single EV charger, the EV chargers will be installed on the west side of the property in the existing parking lot.			

Notation Used in Table:

Column headers:

- C — Indicates continuous inspection is required.
- P — Indicates periodic inspections are required. The notes and/or contract documents should clarify.

Box entries:

- X — Is placed in the appropriate column to denote either "C" continuous or "P" periodic inspections.
- --- — Denotes an activity that is either a one-time activity or one whose frequency is defined in some other manner.

Additional detail regarding inspections and tests are provided in the project specifications or notes on the drawings.

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF FABRICATORS				
1. ☐ Inspect fabricator's fabrication and quality control procedures.	---	---		1704.3

INSPECTION OF STEEL				
1. Material verification of high-strength bolts, nuts and washers.				
☐ Identification marking to conform to ASTM stds specified in the approved construction documents.	---	X	AISC 360, Section A3.3 and applicable ASTM material standards	
☐ Inspect fabricator's fabrication and quality control procedures.	---	X	---	---
2. Inspection of high-strength bolting:				
☐ Snug-tight joints.	---	X	AISC 360, Section M2.5	1704.3.3
☐ Pretensioned and slip-critical joints using turn-of-nut with matchmarking, twist-off bolt or direct tension indicator methods of installation.	---	X		
☐ Pretensioned and slip-critical joints using turn-of-nut without matchmarking or calibrated wrench methods of installation.	X	---		
3. Material verification of structural steel and cold-formed steel deck.				
☐ For structural steel, identification markings to conform to AISC 360.	---	X	AISC 360, Section M2.5	
☐ For other steel, identification markings to conform to ASTM standards specified in the approved construction documents.	---	X	Applicable ASTM material standards	
☐ Manufacturer's certified test reports.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
4. Material verification of weld filler materials:				
☐ Identification marking to conform to AWS specification in the approved construction documents.	---	X	AISC 360, Section A3.5 and applicable AWS A5 documents	---
☐ Manufacturer's certificate of compliance required.	---	X	---	---
5. Inspection of welding:				
a. Structural steel and cold-formed steel deck:				
☐ Complete and partial joint penetration groove welds.	X	---	AWS D1.1	1704.3.1
☐ Multipass fillet welds.	X	---		
☐ Single-pass fillet welds > 5/16"	X	---		
☐ Plug and slot welds.	X	---		
☐ Single-pass fillet welds <= 5/16"	---	X		
☐ Floor and roof deck welds.	---	X	AWS D1.3	
b. Reinforcing steel:				
☐ Verification of weldability of reinforcing steel other than ASTM A 706.	---	X	AWS D1.4 ACI 318: Section 3.5.2	---
☐ Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames, and boundary elements of special structural walls of concrete and shear reinforcement.	X	---		
☐ Shear reinforcement.	X	---		
☐ Other reinforcing steel.	---	X		
6. Inspection of steel frame joints details for compliance:				
☐ Details such as bracing and stiffening.	---	X	---	1704.3.2
☐ Member locations.	---	X		
☐ Application of joint details at each connection.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF WELDING				
1. ☐ Welded studs when used for structural diaphragms.	---	X	---	1704.3
2. ☐ Welding of cold-formed steel framing members.	---	X		
3. ☐ Welding of stairs and railing systems.	---	X		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF CONCRETE				
1. ☐ Inspection of reinforcing steel, including prestressing tendons and placement.	---	X	ACI 318: 3.5, 7.1-7.7	1913.4
2. ☐ Inspection of reinforcing steel welding in accordance with Table 1704.3 Item 5b.	---	---	AWS D1.4 ACI 318: 3.5.2	---
3. ☒ Inspection of bolts to be installed in concrete prior to and during placement of concrete where allowable loads have been increased or where strength design is used.	X	---	ACI 318: 8.1.3, 21.2.8	1911.5, 1912.1
4. ☒ Inspection of anchors installed in hardened concrete.	---	X	ACI 318:	1912.1
5. ☐ Verifying use of required design mix.	---	X	ACI 318:	1904.2.2,1913.2, 1913.3
6. ☐ At time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and determine the temperature of the concrete.	X	---	ASTM C 172 ASTM C 31 ACI 318: 5.6, 5.8	1913.10
7. ☐ Inspection of concrete and shotcrete placement for proper application techniques.	X	---	ACI 318: 5.9, 5.10	1913.6, 1913.7, 1913.8
8. ☐ Inspection for maintenance of specified curing temperature and techniques.	---	X	ACI 318: 5.11-5.13	1913.9
9. Inspection of prestressed concrete:				
☐ Application of prestressing forces.	X	---	ACI 318: 18.20	---
☐ Grouting of bonded prestressing tendons in the seismic force-resisting system.	X	---	ACI 318: 18.18.4	
10. ☐ Erection of precast concrete members.	---	X	ACI 318: Ch. 16	---
11. ☐ Verification of in-situ concrete strength, prior to stressing of tendons in posttensioned concrete and prior to removal of shores and forms from beams and structural slabs.	---	X	ACI 318: 6.2	---
12. ☐ Inspect formwork for shape, location, and dimensions of the concrete member being formed.	---	X	ACI 318: 6.6.1	---
13. ☒ Bolts Installed in Existing Masonry or Concrete				
☐ Direct tension testing of existing anchors.	---	X	See ICC ES Reports form special inspection requirements for proprietary products	
☐ Direct tension testing of new bolts.	---	X		
☒ Torque testing of new bolts.	---	X		
☐ Prequalification test for bolts and other types of anchors.	---	X		
14. ☐ Other:				

VERIFICATION AND INSPECTION	C	P	REFERENCE FOR CRITERIA		
			IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 402/ACI 530/ASCE 6
INSPECTION OF LEVEL 1 MASONRY					
1. ☐ Compliance with required inspection provisions of the construction documents and the approved submittals shall be verified.	---	X	---	---	Art. 1.5
2. ☐ Verification of f'_m and f'_{AAC} prior to construction except where specifically exempted by this code.	---	X	---	---	Art. 1.4B
3. ☐ Verification of slump flow and VSI as delivered to the site for self consolidating grout.	X	---	---	---	Art. 1.5B.1.b.3
4. As masonry construction begins, the following shall be verified to ensure compliance:					
☐ Proportions of site-prepared mortar.	---	X	---	---	Art. 2.6A
☐ Construction of mortar joints.	---	X	---	---	Art.3.3B
☐ Location of reinforcement, connectors, prestressing tendons, and anchorages.	---	X	---	---	Art. 3.4, 3.6A
☐ Prestressing technique.	---	X	---	---	Art. 3.6B
☐ Grade and size of prestressing tendons and anchorages.	---	X	---	---	Art. 2.4B, 2.4H
5. During construction the inspection program shall verify:					
☐ Size and location of structural elements.	---	X	---	---	Art. 3.3F
☐ Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames or other construction.	---	X	---	Sec. 1.2.2(e), 1.16.1	---
☐ Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 2.4, 3.4
☐ Welding of reinforcing bars.	X	---	---		---
☐ Preparation, construction and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).	---	X	Sec. 2104.3, 2104.4	---	Art. 1.8C, 1.8D
☐ Application and measurement of prestressing force.	X	---	---	---	Art. 3.6B
6. Prior to grouting the following shall be verified to ensure compliance:					
☐ Grout space is clean.	---	X	---	---	Art. 3.2D
☐ Placement of reinforcement and connectors and prestressing tendons and anchorages.	---	X	---	Sec. 1.3	Art. 3.4
☐ Proportions of site-prepared grout and prestressing grout for bonded tendons.	---	X	---	---	Art. 2.6B
☐ Construction of mortar joints.	---	X	---	---	Art. 3.3B
7. Grout placement:					
☐ Grout placement shall be verified ensure compliance.	X	---	---	---	Art. 3.5
☐ Observe grouting of prestressing bonded tendons.	X	---	---	---	Art 3.6C

VERIFICATION AND INSPECTION	C	P	REFERENCE FOR CRITERIA		
			IBC SECTION	TMS 402/ACI 530/ASCE 5	TMS 402/ACI 530/ASCE 6
8. ☐ Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	---	X	Sec. 2105.2.2, 2105.3	---	Art. 1.4
INSPECTION OF LEVEL 2 MASONRY					
1. ☐ Compliance with required inspection provisions of the construction documents and the approved submittals.	---	X	---	---	Art. 1.5
2. ☐ Verification of f'_m and f'_{AAC} prior to construction and for every 5,000 square feet during construction.	---	X	---	---	Art. 1.4B
3. ☐ Verification of proportions of materials in premixed or preblended mortar and grout as delivered to the site.	---	X	---	---	Art. 1.5B
4. ☐ Verification of slump flow and VSI as delivered to the site for self consolidating grout.	X	---	---	---	Art. 1.5B.1.b.3
5. The following shall be verified to ensure compliance:					
☐ Proportions of site-prepared mortar, grout, and prestressing grout for bonded tendons.	---	X	---	---	Art. 2.6A
☐ Placement of masonry units and construction of mortar joints.	---	X	---	---	Art. 3.3B
☐ Placement of reinforcement, connectors and prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 3.4, 3.6A
☐ Grout space prior to grouting.	X	---	---	---	Art. 3.2D
☐ Placement of grout.	X	---	---	---	Art. 3.5
☐ Placement of prestressing grout.	X	---	---	---	Art. 3.6C
☐ Size and location of structural elements.	---	X	---	---	Art. 3.3F
☐ Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames and other construction.	X	---	---	Sec.1.2.2(e)	---
☐ Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons and anchorages.	---	X	---	Sec. 1.15	Art. 2.4, 3.4
☐ Welding of reinforcing bars.	X	---	---	Sec. 2.1.9.7.2, 3.3.3.4 (b)	---
☐ Preparation, construction, and protection of masonry during cold weather (temperature below 40 degrees F) or hot weather (temperature above 90 degrees F).	---	X	Sec. 2104.3, 2104.4	---	Art. 1.8C, 1.8D
☐ Application and measurement of prestressing force.	X	---	---	---	Art. 3.6B
6. ☐ Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	X	---	Sec. 2105.2.2, 2105.3	---	Art. 1.4

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
INSPECTION OF WOOD				
1. ☐ Inspect prefabricated wood structural elements and assemblies in accordance with Section 1704.2.	---	---	---	1704.6
2. ☐ Inspect site built assemblies.	---	---		
3. Inspect high-load diaphragms:				
☐ Verify grade and thickness of sheathing.	---	---	---	1704.6.1
☐ Verify nominal size of framing members at adjoining panel edges.	---	---		
☐ Verify nail or staple diameter and length,	---	---		
☐ Verify number of fastener lines,	---	---		
☐ Verify spacing between fasteners in each line and at edge margins.	---	---		
4. ☐ Metal-plate-connected wood trusses spanning 60 feet or greater: Verify temporary installation restraint/bracing and the permanent individual truss member bracing are installed in accordance with the approved truss submittal package.	---	X	---	1704.6.2
REQUIRED VERIFICATION AND INSPECTION OF SOIL				
1. ☐ Verify materials below footings are adequate to achieve the desired bearing capacity.	---	X	---	Table 1704.7
2. ☐ Verify excavations are extended to proper depth and have reached proper material.	---	X		
3. ☐ Perform classification and testing of compacted fill materials.	---	X		
4. ☐ Verify use of proper materials, densities and lift thicknesses during placement and compaction of compacted fill.	X	---		
5. ☐ Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	---	X		
REQUIRED VERIFICATION AND INSPECTION OF DEEP DRIVEN FOUNDATION ELEMENTS				
1. ☐ Verify element materials, sizes and lengths comply with the requirements.	X	---	---	Table 1704.8
2. ☐ Determine capacities of test elements and conduct additional load tests, as required.	X	---		
3. ☐ Observe driving operations and maintain complete and accurate records for each element.	X	---		
4. ☐ Verify locations of piles and their plumbness, confirm type and size of hammer, record number of blows per foot of penetration, determine required penetrations to achieve design capacity, record tip and butt elevations and document any damage to foundation element.	X	---		
5. ☐ For steel elements, perform additional inspections in accordance with Section 1704.3.	---	---		
6. ☐ For concrete elements and concrete filled elements, perform additional inspections in accordance with Section 1704.4.	---	---		

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
7. ☐ For specialty piles, perform additional inspections as determined by the registered design professional in responsible charge.	---	---	---	Table 1704.8
REQUIRED VERIFICATION AND INSPECTION OF CAST-IN-PLACE DEEP FOUNDATION ELEMENTS				
1 ☐ Observe drilling operations and maintain complete and accurate records for each element.	X	---	---	Table 1704.9
2. ☐ Verify placement locations and plumbness, confirm element diameters, bell diameters (if applicable), lengths, embedment into bedrock (if applicable), and adequate end-bearing strata capacity. Record concrete or grout volumes.	X	---		
3. ☐ For concrete elements, perform additional inspections in accordance with Section 1704.4.	---	---		
HELICAL PILE FOUNDATIONS				
1. ☐ Record installation equipment used, pile dimensions, tip elevations, final depth, final installation torque.	X	---	---	1704.10
SPRAYED FIRE-RESISTANT MATERIALS				
Physical and visual tests				
1. Condition of substrates.				
☐ Inspect surface for accordance with the approved fire-resistance design and the approved manufacturer's written instructions.	---	---	---	1704.12.1
☐ Verify minimum ambient temperature before and after application.	---	X		
☐ Verify ventilation of area during and after application.	---	X		
2. ☐ Measure average thickness per ASTM E605 and Section 1704.12.4.	---	---		
3. ☐ Verify density of material for conformance with the approved fire-resistant design and ASTM E605. (Ref. Section 1704.12.5)	---	---		
4. ☐ Test cohesive/adhesive bond strength per Section 1704.12.6.	---	---		
5. ☐ Condition of finished application.				
MISCELLANEOUS				
1. Mastic and Intumescent Fire-Resistant Coating.	---	---	---	1704.13
2. Exterior Insulation and Finish Systems (EIFS). Water-resistive barrier coating when installed over a sheathing substrate.	---	---	---	1704.14
3. Special Cases	---	---	---	1704.15
4. Smoke Control System	---	---	---	1704.16
5. Seismic Resistance				
☐ Suspended ceiling systems and their anchorage.	---	---	---	1705.3 [4.3]

VERIFICATION AND INSPECTION	C	P	REFERENCED STANDARD	IBC REFERENCE
6. Wind Resistance				
☐ Roof cladding and roof framing connections.	---	---	---	
☐ Wall connections to roof and floor diaphragms and framing.	---	---	---	
☐ Roof and floor diaphragm systems, including collectors, drag struts and boundary elements.	---	---	---	
☐ Vertical wind-force-resisting systems, including braced frames, moment frames, and shear walls.	---	---	---	
☐ Wind-force-resisting system connections to the foundation.	---	---	---	
☐ Fabrication and installation of systems or components required to meet the impact resistance requirements of Section 1609.1.2.	---	---	---	
SPECIAL INSPECTION FOR WIND REQUIREMENTS				
1. Structural Wood				
☐ Inspect field gluing operations of elements of the main wind-force-resisting system.	X	---	---	1706.2
☐ Inspect nailing, bolting, anchoring, and other fastening of components within the main windforce-resisting system, including wood shear walls, wood diaphragms, drag struts, braces and hold-downs.	---	X		
2. Cold-Formed Steel Framing				
☐ Welding of elements of the main wind-force-resisting system.	---	X	---	1706.3
☐ Inspection of screw attachments, bolting, anchoring, and other fastening of components within the main wind-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.	---	X		
3. Wind-resisting components				
☐ Roof cladding.	---	X	---	1706.4
☐ Wall cladding.	---	X		
SPECIAL INSPECTIONS FOR SEISMIC RESISTANCE				
1. ☐ Special inspection for welding in accordance with the quality assurance plan requirements of AISC 341.	X	---		1707.2
2. Structural Wood				
☐ Inspect field gluing operations of elements of the seismic-force-resisting system.	X	---		1707.3
☐ Inspect nailing, bolting, anchoring, and other fastening of components within the seismic-force-resisting system, including wood shear walls, wood diaphragms, drag struts, braces, shear panels and hold-downs.	---	X		
3. Cold-Formed steel light-frame construction				
☐ Welding of elements of the seismic-force-resisting system.	---	X		1707.4

☐	Inspection of screw attachments, bolting, anchoring, and other fastening of components within the seismic-force-resisting system including shear walls, braces, diaphragms, collectors (drag struts) and hold-downs.	---	X		
4.	Storage racks and access floors				
☐	Anchorage of storage racks 8 feet or greater in height and access floors.	---	X		1707.5
5.	Architectural components				
☐	Inspect erection and fastening of exterior cladding weighing more than 5 psf and higher than 30 feet above grade or walking surface.	---	X	---	1707.6
☐	Inspect erection and fastening of veneer weighing more than 5 psf.and higher than 30 feet above grade or walking surface.	---	X		
☐	Inspect erection and fastening of all exterior non-bearing walls higher than 30 feet above grade or walking surface.	---	X		
☐	Inspect erection and fastening of all interior non-bearing walls weighing more than 15 psf and higher than 30 feet above grade or walking surface.	---	X		
6.	Mechanical and Electrical Components				
☐	Inspect anchorage of electrical equipment for emergency or stand-by power systems.	---	X	---	1707.7
☐	Inspect anchorage of non-emergency electrical equipment.	---	X		
☐	Inspect installation of piping systems and associated mechanical units carrying flammable, combustible, or highly toxic contents.	---	X		
☐	Inspect installation of HVAC ductwork that contains hazardous materials.	---	X		
☐	Inspect installation of vibration isolation systems where required by Section 1707.7.	---	X		
7. ☐	Verify that the equipment label and anchorage or mounting conforms to the certificate of compliance when mechanical and electrical equipment must be seismically qualified.	---	---	---	1707.8
8. ☐	Seismic isolation system: Inspection of isolation system per ASCE 7 – Section 17.2.4.8	---	X	---	1707.9
9. ☐	Obtain mill certificates for reinforcing steel, verify compliance with approved construction documents, and verify steel supplied corresponds to certificate.	---	---	---	1708.2
10. ☐	Structural Steel: Invoke the QAP Quality Assurance requirements in AISC 341.	---	---	---	1708.3
11. ☐	Obtain certificate that equipment has been seismically qualified.	---	---	---	1708.4
12. ☐	Obtain system tests as required by ASCE 7 Section 17.8.	---	---	---	1708.5

STRUCTURAL CALCULATIONS

FOR

EV CHARGER & SWITCHBOARD PAD FOUNDATIONS

Mendocino County

727 South State Street, Ukiah, CA 95482

4LEAF, INC.
Building
10/04/2024
Reviewed For
Code Compliance

PREPARED FOR

Eva Green

2445 Impala Drive, Carlsbad, CA 92010

PREPARED BY

4 S.T.E.L. ENGINEERING, INC.

26030 ACERO

MISSION VIEJO, CA 92691

PH: (949) 305-1150

PROJECT NO. 24-1007

June 28, 2024

REGISTERED PROFESSIONAL ENGINEER
DUSTIN K. ROSEPINK
S 5885
STRUCTURAL
STATE OF CALIFORNIA

Sheet: 2

Client: Eva Green | Job No.: 24-1007

Project: EV CHARGER & SWITCHBOARD PAD FOUNDATIONS | Date: 6/28/24

CALCULATION INDEX | Engineer: 4STEL

INDEX TO STRUCTURAL CALCULATIONS

Client EVA GREEN | Job No.: 24-1023

Project Mendocino County EV CHARGER & SWITCHBOARD PAD | Date: 6/28/24

TYPICAL EV CHARGER PAD - SEISMIC COMPONENTS | Engineer: 4STEL

SEISMIC LOADS FOR NONSTRUCTURAL COMPONENTS - ASCE 7-16, SECTION 13.3.1

Seismic Importance Factor, I_p	=	1.00	(Tbl. 1.5-2)
Component Amplification Factor, a_p	=	1.0	(Tbl. 13.6-1)
Response Modification Factor, R_p	=	2.5	(Tbl. 13.6-1)
Height of Equip. Attachment Point, z	=	0.0 (ft)	(Sec. 13.3.1.1)
Equipment Height, h	=	6.0 (ft)	(Sec. 13.3.1)
Short Period Spectral Accel., S_{DS}	=	1.545 (g)	(Eq. 11.4-3)
$C_P = 0.4a_p.S_{DS}[1 + 2z/h]/ [R_P/I_P]$	=	0.25	(Eq. 13.3-1)
Maximum, $C_P = 1.6S_{DS}.I_P$	=	2.47	(Eq. 13.3-2)
Minimum, $C_P = 0.3S_{DS}.I_P$	=	0.46	(Eq. 13.3-3)
Seismic Lateral Load Coefficient, C_P	=	0.46	(Governing Value)
Seismic Vert. Load Coeff., $C_{PV}= 0.2S_{DS}$	=	0.31	(Sec. 13.3.1)

Client	EVA GREEN	Job No.:	24-1023
Project	Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNDATIONS		6/28/24
	TYPICAL EV CHARGER PAD DATA	Engineer:	4STEL

PAD MOUNTED ELECTRICAL EQUIPMENT DATA

EQUIPMENT	WEIGHT	LENGTH	WIDTH	HEIGHT	HT. TO C.G.
EV Charger	150 (lb)	9.6 (in)	11.1 (in)	71.5 (in)	42.9 (in)

CONCRETE PAD DATA

Concrete Pad Length,	L_x =	2.00 (ft)
Concrete Pad Width,	L_y =	2.00 (ft)
Concrete Pad Thickness,	t_c =	2.00 (ft)
Concrete Pad Edge Depth,	d_e =	2.00 (ft)
Concrete Pad Edge Width,	b_e =	0.00 (ft)
Concrete Density,	p_c =	150 (pcf)

Concrete Foundation Weight,

$$W = p_c.[\ L_x.L_y.t_c + (\ L_x.L_y - (L_x - 2.b_e).(L_y - 2.b_e)\ ).(d_e - t_c)\ ] = 1{,}200 \text{ (lb)}$$

ALLOWABLE SOIL VALUES

Use presumptive values per CBC 2022 Table 1806.2

Allowable Soil Bearing Pressure,	P_{sa} =	1,500 (psf)
Allowable Soil Passive Pressure,	P_p =	100 (pcf)
Allowable Soil Cohseion,	c_s =	130 (psf)

Client EVA GREEN | Job No.: MC02-01-0

Project Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNDATIONS | Date: 6/28/24

TYPICAL EV CHARGER PAD - SEISMIC ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD SEISMIC ANALYSIS

Seismic Lateral Force Coeff.,	C_P =	0.46
Concrete Pad Length,	L_x =	2.00 (ft)
Concrete Pad Width,	L_y =	2.00 (ft)
Concrete Pad Edge Depth,	d_e =	2.00 (ft)
Allowable Soil Bearing Pressure,	P_{sa} =	1,500 (psf)
Allowable Soil Passive Pressure,	P_p =	100 (pcf)

Allow. Soil Cohseion, c_s = 130 (psf)

SEISMIC LOADS TO COMPONENT

UNIT	W_p (lb)	H (ft)	x_{cg} (ft)	y_{cg} (ft)	F_p (lb)	H_{cg} (ft)	M_o (ft-lb)
CONCRETE PAD	1,200	0.00	0.00	0	0	0.00	0
EV Charger	150	5.96	0.40	0.14	70	3.58	249
ΣW_p =	1,350			ΣF_p =	70	ΣM_o =	249

$F_p = C_p.W_p$ $\quad e_{x,D} = (\Sigma W_p.x_{cg}) / \Sigma W_p$ = 0.045 (ft)

$M_o = F_p.H_{cg}$ $\quad e_{y,D} = (\Sigma W_p.y_{cg}) / \Sigma W_p$ = 0.016 (ft)

CBC Alt ASD Load Combination 16-21 : D + E/1.4

Load Case 1, Seismic X-Direction : D + E_x/1.4

$e_{X,D+E} = |e_{X,D}| + (\Sigma M_o/1.4)/\Sigma W_p$ = 0.176 (ft) < $L_x/6$ = 0.333 (ft)

$P_s^{(max)} = [\Sigma W_p/(L_x.L_y)].(1 + 6.e_{X,D+E}/L_x)$ → $e_{x,D+E} \le L_x/6$

$P_s^{(max)} = 2.\Sigma W_p / [3.(L_x/2 - e_{X,D+E}).L_y]$ → $e_{x,D+E} > L_x/6$

$P_s^{(max)}$ = 516 (psf) < P_{sa} = 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = \Sigma W_p.(L_x/2 - |e_{x,D}|)$ = 1,290 (ft.lb) $M_R / (\Sigma M_o/1.4)$ = 7.27 **O.K.**

$L_{x(eff)} = \min.[L_x, 3.(L_x/2 - e_{x,D+E})]$ = 2.000 (ft)

$R_{sx} = c_s.L_{x(eff)}.L_y + (4/3).P_p.L_y.(d_e - 0.16)^2$ = 675 (lb) $R_{sx} / (\Sigma F_p/1.4)$ = 13.59 **O.K.**

Load Case 2, Seismic Y-Direction : D + E_y/1.4

$e_{y,D+E} = |e_{y,D}| + (\Sigma M_o/1.4)/\Sigma W_p$ = 0.148 (ft) < $L_y/6$ = 0.333 (ft)

$P_s^{(max)} = [\Sigma W_p/(L_x.L_y)].(1 + 6.e_{y,D+E}/L_y)$ → $e_{y,D+E} \le L_y/6$

$P_s^{(max)} = 2.\Sigma W_p) / [3.(L_y/2 - e_{y,D+E}).L_x]$ → $e_{y,D+E} > L_y/6$

$P_s^{(max)}$ = 487 (psf) < P_{sa} = 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = \Sigma W_p.(L_y/2 - |e_{y,D}|)$ = 1,328 (ft.lb) $M_R / (\Sigma M_o/1.4)$ = 7.48 **O.K.**

$L_{y(eff)} = \min.[L_y, 3.(L_y/2 - e_{y,D+E})]$ = 2.000 (ft)

$R_{sy} = c_s.L_x.L_{y(eff)} + (4/3).P_p.L_x.(d_e - 0.16)^2$ = 675 (lb) $R_{sy} / (\Sigma F_p/1.4)$ = 13.59 **O.K.**

Client EVA GREEN Job No.: MC02-01-0

Project Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNDATIONS Date: 6/28/24

TYPICAL EV CHARGER PAD - SEISMIC ANALYSIS Engineer: 4STEL

EQUIPMENT PAD SEISMIC ANALYSIS

CBC Alt ASD Load Combination 16-22 : 0.9D + E/1.4

Load Case 1, Seismic X-Direction : 0.9D + E_x /1.4

$e_{X,D+E} = |e_{X,D}| + (\sum M_o/1.4) / (0.9.\sum W_p) =$ 0.191 (ft) < $L_x/6 =$ 0.333 (ft)

$P_s^{(max)} = [0.9.\sum W_p/(L_x.L_y)].(1 + 6.e_{X,D+E}/L_x) \rightarrow e_{X,D+E} \leq L_x/6$

$P_s^{(max)} = 2 \times 0.9.\sum W_p / [3.(L_x/2 - e_{X,D+E}).L_y] \rightarrow e_{X,D+E} > L_x/6$

$P_s^{(max)} =$ 478 (psf) < $P_{sa} =$ 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = 0.9.\sum W_p.(L_x/2 - |e_{x,D}|) =$ 1,161 (ft.lb) $M_R / (\sum M_o/1.4) =$ 6.54 **O.K.**

$L_{x(eff)} = \min.[L_x, 3.(L_x/2 - e_{x,D+E})] =$ 2.000 (ft)

$R_{sx} = c_s.L_{x(eff)}.L_y + (4/3).P_p.L_y.(d_e - 0.16)^2 =$ 675 (lb) $R_{sx}/(\sum F_p/1.4) =$ 13.59 **O.K.**

Load Case 2, Seismic Y-Direction : 0.9D + E_y /1.4

$e_{y,D+E} = |e_{y,D}| + (\sum M_o/1.4) / (0.9.\sum W_p) =$ 0.162 (ft) < $L_y/6 =$ 0.333 (ft)

$P_s^{(max)} = [0.9.\sum W_p/(L_x.L_y)].(1 + 6.e_{y,D+E}/L_y) \rightarrow e_{y,D+E} \leq L_y/6$

$P_s^{(max)} = 2 \times 0.9.\sum W_p) / [3.(L_y/2 - e_{y,D+E}).L_x] \rightarrow e_{y,D+E} > L_y/6$

$P_s^{(max)} =$ 452 (psf) < $P_{sa} =$ 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = 0.9.\sum W_p.(L_y/2 - |e_{y,D}|) =$ 1,196 (ft.lb) $M_R / (\sum M_o/1.4) =$ 6.73 **O.K.**

$L_{y(eff)} = \min.[L_y, 3.(L_y/2 - e_{y,D+E})] =$ 2.000 (ft)

$R_{sy} = c_s.L_x.L_{y(eff)} + (4/3).P_p.L_x.(d_e - 0.16)^2 =$ 675 (lb) $R_{sy}/(\sum F_p/1.4) =$ 13.59 **O.K.**

Client EVA GREEN | Job No.: MC02-01-01

Project Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNDATIONS | Date: 6/28/24

TYPICAL EV CHARGER PAD WIND ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD WIND ANALYSIS PER ASCE 7-16 Chapter 29

Wind Exposure =	C	Basic Wind Speed, V =	91 (mph)
Wind Velocity Pressure Coefficient, K_z =	0.85	Wind Directionality Factor, K_d =	0.85
Topographgical Factor, K_{zt} =	1.00	$q_h = 0.00256.K_d.K_z.K_{zt}.V^2$ =	15.3 (psf)
Wind Gust Effect Factor, G =	0.85		
Wind Force-X Coefficient , C_{fx} =	1.66	Wind Pressure, $P_{wx} = q_h.G.C_{fx}$ =	21.7 (psf)
Wind Force-Y Coefficient , C_{fy} =	1.62	Wind Pressure, $P_{wy} = q_h.G.C_{fy}$ =	21.1 (psf)
Concrete Pad Length, L_x =	2.00 (ft)	Concrete Pad Width, L_y =	2.00 (ft)
Allowable Soil Bearing Pressure, P_{sa} =	1,500 (psf)	Concrete Pad Edge Depth, d_e =	2.00 (ft)
Allowable Soil Passive Pressure, P_p =	100 (pcf)	Allowable Soil Cohseion, c_s =	130 (psf)

WIND LOADS TO COMPONENT

UNIT	W (lb)	H (ft)	x_{cg} (ft)	y_{cg} (ft)	A_{TX} (ft^2)	A_{TY} (ft^2)	F_x (lb)	F_y (lb)
CONCRETE PAD	1,200	0.00	0.00	0.00	0.00	0.00	0	0
EV Charger	150	5.96	0.00	0.00	5.52	4.78	120	101
$\Sigma W_{(x,y)}$ =	1,350					$\Sigma F_{(x,y)}$ =	120	101

$F_{(x,y)} = P_{w(x,y)}.A_{T(x,y)}$ $\quad e_{x,D} = (\Sigma W.x_{cg}) / \Sigma W$ = 0.000 (ft)

$M_{o(x.y)} = F_{(x,y)}.0.55.H$ $\quad e_{y,D} = (\Sigma W.y_{cg}) / \Sigma W$ = 0.000 (ft)

$\Sigma M_{o(x)}$ = 392 (ft.lb) $\quad \Sigma M_{o(y)}$ = 331 (ft.lb)

CBC ASD Load Combination 16-12 : D + 0.6W

Load Case 1, Wind X-Direction : D + 0.6W$_x$

$e_{X,D+W} = |e_{x,D}| + 0.6.\Sigma M_{ox}/\Sigma W$ = 0.174 (ft) < $L_x/6$ = 0.333 (ft)

$P_s^{(max)} = [\Sigma W/(L_x.L_y)].(1 + 6.e_{x,D+W}/L_x) \rightarrow e_{X,D+W} \leq L_x/6$

$P_s^{(max)} = 2.\Sigma W / [3.(L_x/2 - e_{x,D+W}).L_y] \rightarrow e_{X,D+W} > L_x/6$

$P_s^{(max)}$ = 514 (psf) < P_{sa} = 1,500 (psf) **O.K.**

$M_{Rx}^{(min)} = \Sigma W.(L_x/2 - |e_{x,D}|)$ = 1,350 (ft.lb) $\quad M_{Rx} / (0.6.\Sigma M_{ox})$ = 5.73 **O.K.**

$R_{sx} = c_s.L_{x(eff)}.L_y + P_p.L_y.(d_e - 0.16)^2$ = 675 (lb) $\quad R_{sx} / (0.6.\Sigma F_x)$ = 9.40 **O.K.**

Load Case 2, Wind Y-Direction : D + 0.6W$_y$

$e_{y,D+W} = |e_{y,D}| + 0.6.\Sigma M_{oy}/\Sigma W$ = 0.147 (ft) < $L_y/6$ = 0.333 (ft)

$P_s^{(max)} = [\Sigma W/(L_x.L_y)].(1 + 6.e_{y,D+W}/L_y) \rightarrow e_{y,D+W} \leq L_x/6$

$P_s^{(max)} = 2.\Sigma W / [3.(L_y/2 - e_{y,D+W}).L_x] \rightarrow e_{y,D+W} > L_x/6$

$P_s^{(max)}$ = 486 (psf) < P_{sa} = 1,500 (psf) **O.K.**

$M_{Ry}^{(min)} = \Sigma W.(L_y/2 - |e_{y,D}|)$ = 1,350 (ft.lb) $\quad M_{Ry} / (0.6.\Sigma M_{oy})$ = 6.80 **O.K.**

$R_{sy} = c_s.L_x.L_{y(eff)} + P_p.L_x.(d_e - 0.16)^2$ = 675 (lb) $\quad R_{sy} / (0.6.\Sigma F_y)$ = 11.14 **O.K.**

Client EVA GREEN | Job No.: MC02-01-01

Project Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNDATIONS | Date: 6/28/24

TYPICAL EV CHARGER PAD WIND ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD WIND ANALYSIS PER ASCE 7-16 Chapter 29

CBC ASD Load Combination 16-15 : 0.6.D + 0.6.W

Load Case 1, Wind X-Direction : 0.6.D + 0.6W$_x$

$e_{X,D+W}$ = $|e_{X,D}| + 0.6.\sum M_{ox} / (0.6.\sum W)$ = 0.291 (ft) < $L_x/6$ = 0.333 (ft)

$P_s^{(max)}$ = $[0.6.\sum W/(L_x.L_y)].(1 + 6.e_{X,D+W}/L_x)$ → $e_{X,D+W} \le L_x/6$

$P_s^{(max)}$ = $2 \times 0.6.\sum W / [3.(L_x/2 - e_{X,D+W}).L_y]$ → $e_{X,D+W} > L_x/6$

$P_s^{(max)}$ = 379 (psf) < P_{sa} = 2,000 (psf) **O.K.**

$M_{Rx}^{(min)}$ = $0.6.\sum W.(L_x/2 - |e_{X,D}|)$ = 810 (ft.lb) $M_{Rx} / (0.6.\sum M_{ox})$ = 3.44 **O.K.**

$\sum F_x$ = 120 (lb)

$L_{x(eff)}$ = $\min.[L_x, 3.(L_x/2 - e_{X,D+W})]$ = 2.000 (ft)

R_{sx} = $c_s.L_{x(eff)}.L_y + P_p.L_y.(d_e - 0.16)^2$ = 675 (lb) $R_{sx} / (0.6.\sum F_x)$ = 9.40 **O.K.**

Load Case 2, Wind Y-Direction : 0.6.D + 0.6W$_y$

$e_{y,D+W}$ = $|e_{Y,D}| + 0.6.\sum M_{oy} / (0.6.\sum W)$ = 0.245 (ft) < $L_y/6$ = 0.333 (ft)

$P_s^{(max)}$ = $[0.6.\sum W/(L_x.L_y)].(1 + 6.e_{Y,D+W}/L_y)$ → $e_{y,D+W} \le L_x/6$

$P_s^{(max)}$ = $2 \times 0.6.\sum W / [3.(L_y/2 - e_{y,D+W}).L_x]$ → $e_{y,D+W} > L_x/6$

$P_s^{(max)}$ = 351 (psf) < P_{sa} = 1,500 (psf) **O.K.**

$M_{Ry}^{(min)}$ = $0.6.\sum W.(L_y/2 - |e_{y,D}|)$ = 810 (ft.lb) $M_{Ry} / (0.6.\sum M_{oy})$ = 4.08 **O.K.**

$\sum F_y$ = 101 (lb)

$L_{y(eff)}$ = $\min.[L_y, 3.(L_y/2 - e_{y,D+W})]$ = 2.000 (ft)

R_{sy} = $c_s.L_x.L_{y(eff)} + P_p.L_y.(d_e - 0.16)^2$ = 675 (lb) $R_{sy} / (0.6.\sum F_y)$ = 11.14 **O.K.**

Client Eva Green | Job No.: 24-1007

Project Mendocino County EV CHARGER & SWITCHBOARD PAD FOUNC | Date: 6/28/24

TYPICAL EQUIPMENT PAD - ANCHOR DESIGN | Engineer: 4STEL

EQUIPMENT ANCHORAGE

Strength Level Seismic Lateral Force Coefficient, C_P	=	**0.46**
Strength Level Seismic Vertical Force Coefficient, C_{PV}	=	**± 0.31**
Maximum Strength Level Wind Pressure, P_w	=	**21.7 psf**

Equipment		W_{EQ} (lb)	H (ft)	H_{CG}	$A_{w,x}$ (ft^2)	$A_{w,y}$ (ft^2)
1	EV Charger	150	5.96	3.58	5.52	4.78

LRFD Seismic Loads (0.9D + 1.0E)

n_v = No. of anchors resisting shear

d_{min} = Shortest distance between anchor rows

n_t = No. of anchors resisting uplift

$V_E = \Omega.C_p.W_{EQ}$

$V_A = V_E/n_v$

$T_A = (0.9W_{EQ}-E_v)/n_v - 0.6.H.V_E/(d_{MIN}.n_t) < 0$

$E_v = C_{PV}.W_{EQ}$

Ω = 2.5

LRFD Wind Loads (0.9D + 1.0W)

n_v = No. of anchors resisting shear

d_{min} = Shortest distance between anchor rows

n_t = No. of anchors resisting uplift

$V_W = P_w.A_w$

$V_A = V_W/n_v$

$T_A = 0.9W_{EQ}/n_v - 0.55.H.V_W/(d_{MIN}.n_t) < 0$

Seismic Anchor Demand

UNIT		V_E (lb)	n_v	V_A (lb)	H_{CG} (ft)	d_{min} (ft)	n_t	E_v (lb)	T_A (lb)	ϕ_A (in)
1	EV Charger	70	3	**58**	3.6	0.552	2	46	**-533**	1/2

Wind Anchor Demand

UNIT		V_W (lb)	n_v	V_A (lb)	0.55H (ft)	d_{min} (ft)	n_t	T_A (lb)	ϕ_A (in)
1	EV Charger	120	3	**40**	3.3	0.552	2	**-310**	1/2

See attached Hilti KB-TZ2 Anchorage Calculations for worst case demand capacity ratios for anchors.

Client	EVA GREEN	Job No.:	24-1023
Project	Mendocino County SWITCHBOARD PAD FOUNDATION		6/28/24
	SWITCHBOARD PAD DATA	Engineer:	4STEL

PAD MOUNTED ELECTRICAL EQUIPMENT DATA

EQUIPMENT	WEIGHT	LENGTH	WIDTH	HEIGHT	HT. TO C.G.
SWITCHBOARD	1,790 (lb)	72.0 (in)	35.5 (in)	91.5 (in)	54.9 (in)

CONCRETE PAD DATA

Concrete Pad Length,	L_x =	7.00 (ft)
Concrete Pad Width,	L_y =	4.00 (ft)
Concrete Pad Thickness,	t_c =	0.67 (ft)
Concrete Pad Edge Depth,	d_e =	0.67 (ft)
Concrete Pad Edge Width,	b_e =	0.00 (ft)
Concrete Density,	p_c =	150 (pcf)

Concrete Foundation Weight,

$$W = p_c.[\ L_x.L_y.t_c + (\ L_x.L_y - (L_x - 2.b_e).(L_y - 2.b_e)\ ).(d_e - t_c)\ ] = 2{,}800 \text{ (lb)}$$

ALLOWABLE SOIL VALUES

Use presumptive values per CBC 2022 Table 1806.2

Allowable Soil Bearing Pressure,	P_{sa} =	1,500 (psf)
Allowable Soil Passive Pressure,	P_p =	100 (pcf)
Allowable Soil Cohseion,	c_s =	130 (psf)

Client EVA GREEN | Job No.: MC02-01-0

Project Mendocino County SWITCHBOARD PAD FOUNDATION | Date: 6/28/24

SWITCHBOARD PAD - SEISMIC ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD SEISMIC ANALYSIS

Seismic Lateral Force Coeff.,	C_P =	0.46
Concrete Pad Length,	L_x =	7.00 (ft)
Concrete Pad Width,	L_y =	4.00 (ft)
Concrete Pad Edge Depth,	d_e =	0.67 (ft)
Allowable Soil Bearing Pressure,	P_{sa} =	1,500 (psf)
Allowable Soil Passive Pressure,	P_p =	100 (pcf)

Allow. Soil Cohseion, c_s = 130 (psf)

SEISMIC LOADS TO COMPONENT

UNIT	W_p (lb)	H (ft)	x_{cg} (ft)	y_{cg} (ft)	F_p (lb)	H_{cg} (ft)	M_o (ft-lb)
CONCRETE PAD	2,800	0.00	0.00	0	0	0.00	0
SWITCHBOARD	1,790	7.63	3.00	0.14	830	4.58	3,796
ΣW_p =	4,590				ΣF_p =	830	ΣM_o = 3,796

$F_p = C_p.W_p$ $\quad$ $e_{x,D} = (\Sigma W_p.x_{cg}) / \Sigma W_p$ = 1.170 (ft)

$M_o = F_p.H_{cg}$ $\quad$ $e_{y,D} = (\Sigma W_p.y_{cg}) / \Sigma W_p$ = 0.056 (ft)

CBC Alt ASD Load Combination 16-21 : D + E/1.4

Load Case 1, Seismic X-Direction : D + E$_x$/1.4

$e_{X,D+E} = |e_{X,D}| + (\Sigma M_o/1.4)/\Sigma W_p$ = 1.761 (ft) > $L_x/6$ = 1.167 (ft)

$P_s^{(max)} = [\Sigma W_p/(L_x.L_y)].(1 + 6.e_{X,D+E}/L_x)$ → $e_{X,D+E} \le L_x/6$

$P_s^{(max)} = 2.\Sigma W_p / [3.(L_x/2 - e_{X,D+E}).L_y]$ → $e_{X,D+E} > L_x/6$

$P_s^{(max)}$ = 440 (psf) < P_{sa} = 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = \Sigma W_p.(L_x/2 - |e_{X,D}|)$ = 10,695 (ft.lb) $M_R / (\Sigma M_o/1.4)$ = 3.94 **O.K.**

$L_{x(eff)} = \min.[L_x, 3.(L_x/2 - e_{X,D+E})]$ = 5.22 (ft)

$R_{sx} = c_s.L_{x(eff)}.L_y + (4/3).P_p.L_y.(d_e - 0.16)^2$ = 2,295 (lb) $R_{sx} / (\Sigma F_p/1.4)$ = 3.87 **O.K.**

Load Case 2, Seismic Y-Direction : D + E$_y$/1.4

$e_{y,D+E} = |e_{y,D}| + (\Sigma M_o/1.4)/\Sigma W_p$ = 0.647 (ft) < $L_y/6$ = 0.667 (ft)

$P_s^{(max)} = [\Sigma W_p/(L_x.L_y)].(1 + 6.e_{y,D+E}/L_y)$ → $e_{y,D+E} \le L_y/6$

$P_s^{(max)} = 2.\Sigma W_p) / [3.(L_y/2 - e_{y,D+E}).L_x]$ → $e_{y,D+E} > L_y/6$

$P_s^{(max)}$ = 323 (psf) < P_{sa} = 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = \Sigma W_p.(L_y/2 - |e_{y,D}|)$ = 8,921 (ft.lb) $M_R / (\Sigma M_o/1.4)$ = 3.29 **O.K.**

$L_{y(eff)} = \min.[L_y, 3.(L_y/2 - e_{y,D+E})]$ = 4.00 (ft)

$R_{sy} = c_s.L_x.L_{y(eff)} + (4/3).P_p.L_x.(d_e - 0.16)^2$ = 2,295 (lb) $R_{sy} / (\Sigma F_p/1.4)$ = 3.87 **O.K.**

CBC Alt ASD Load Combination 16-22 : 0.9D + E/1.4

Client EVA GREEN Job No.: MC02-01-0

Project Mendocino County SWITCHBOARD PAD FOUNDATION Date: 6/28/24

SWITCHBOARD PAD - SEISMIC ANALYSIS Engineer: 4STEL

EQUIPMENT PAD SEISMIC ANALYSIS

Load Case 1, Seismic X-Direction : 0.9D + E_x /1.4

$e_{X,D+E} = |e_{X,D}| + (\sum M_o/1.4) / (0.9.\sum W_p) =$ 1.826 (ft) > $L_x/6 =$ 1.17 (ft)

$P_s^{(max)} = [0.9.\sum W_p/(L_x.L_y)].(1 + 6.e_{X,D+E}/L_x) \rightarrow e_{X,D+E} \leq L_x/6$

$P_s^{(max)} = 2 \times 0.9.\sum W_p / [3.(L_x/2 - e_{X,D+E}).L_y] \rightarrow e_{X,D+E} > L_x/6$

$P_s^{(max)} =$ 411 (psf) < $P_{sa} =$ 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = 0.9.\sum W_p.(L_x/2 - |e_{x,D}|) =$ 9,626 (ft.lb) $M_R/(\sum M_o/1.4) =$ 3.55 **O.K.**

$L_{x(eff)} = \min.[L_x, 3.(L_x/2 - e_{x,D+E})] =$ 5.02 (ft)

$R_{sx} = c_s.L_{x(eff)}.L_y + (4/3).P_p.L_y.(d_e - 0.16)^2 =$ 2,295 (lb) $R_{sx}/(\sum F_p/1.4) =$ 3.87 **O.K.**

Load Case 2, Seismic Y-Direction : 0.9D + E_y /1.4

$e_{y,D+E} = |e_{y,D}| + (\sum M_o/1.4) / (0.9.\sum W_p) =$ 0.713 (ft) > $L_y/6 =$ 0.667 (ft)

$P_s^{(max)} = [0.9.\sum W_p/(L_x.L_y)].(1 + 6.e_{y,D+E}/L_y) \rightarrow e_{y,D+E} \leq L_y/6$

$P_s^{(max)} = 2 \times 0.9.\sum W_p) / [3.(L_y/2 - e_{y,D+E}).L_x] \rightarrow e_{y,D+E} > L_y/6$

$P_s^{(max)} =$ 306 (psf) < $P_{sa} =$ 1,500 x (4/3) = 2,000 (psf) **O.K.**

$M_R^{(min)} = 0.9.\sum W_p.(L_y/2 - |e_{y,D}|) =$ 8,029 (ft.lb) $M_R/(\sum M_o/1.4) =$ 2.96 **O.K.**

$L_{y(eff)} = \min.[L_y, 3.(L_y/2 - e_{y,D+E})] =$ 3.862 (ft)

$R_{sy} = c_s.L_x.L_{y(eff)} + (4/3).P_p.L_x.(d_e - 0.16)^2 =$ 2,295 (lb) $R_{sy}/(\sum F_p/1.4) =$ 3.87 **O.K.**

Client EVA GREEN | Job No.: MC02-01-01

Project Mendocino County SWITCHBOARD PAD FOUNDATION | Date: 6/28/24

SWITCHBOARD PAD WIND ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD WIND ANALYSIS PER ASCE 7-16 Chapter 29

Wind Exposure =	C	Basic Wind Speed, V =	91 (mph)
Wind Velocity Pressure Coefficient, K_z =	0.85	Wind Directionality Factor, K_d =	0.85
Topographgical Factor, K_{zt} =	1.00	$q_h = 0.00256.K_d.K_z.K_{zt}.V^2$ =	15.3 (psf)
Wind Gust Effect Factor, G =	0.85		
Wind Force-X Coefficient , C_{fx} =	1.59	Wind Pressure, $P_{wx} = q_h.G.C_{fx}$ =	20.7 (psf)
Wind Force-Y Coefficient , C_{fy} =	1.49	Wind Pressure, $P_{wy} = q_h.G.C_{fy}$ =	19.4 (psf)
Concrete Pad Length, L_x =	7.00 (ft)	Concrete Pad Width, L_y =	4.00 (ft)
Allowable Soil Bearing Pressure, P_{sa} =	1,500 (psf)	Concrete Pad Edge Depth, d_e =	0.67 (ft)
Allowable Soil Passive Pressure, P_p =	100 (pcf)	Allowable Soil Cohseion, c_s =	130 (psf)

WIND LOADS TO COMPONENT

UNIT	W (lb)	H (ft)	x_{cg} (ft)	y_{cg} (ft)	A_{TX} (ft^2)	A_{TY} (ft^2)	F_x (lb)	F_y (lb)
CONCRETE PAD	2,800	0.00	0.00	0.00	0.00	0.00	0	0
SWITCHBOARD	1,790	7.63	0.00	0.00	22.56	45.75	466	889
$\Sigma W_{(x,y)}$ =	4,590					$\Sigma F_{(x,y)}$ =	466	889

$F_{(x,y)} = P_{w(x,y)}.A_{T(x,y)}$ $\quad e_{x,D} = (\Sigma W.x_{cg}) / \Sigma W$ = 0.000 (ft)

$M_{o(x.y)} = F_{(x,y)}.0.55.H$ $\quad e_{y,D} = (\Sigma W.y_{cg}) / \Sigma W$ = 0.000 (ft)

$\Sigma M_{o(x)}$ = 1,955 (ft.lb) $\quad \Sigma M_{o(y)}$ = 3,728 (ft.lb)

CBC ASD Load Combination 16-12 : D + 0.6W

Load Case 1, Wind X-Direction : D + 0.6W $_x$

$e_{X,D+W} = |e_{x,D}| + 0.6.\Sigma M_{ox}/\Sigma W$ = 0.256 (ft) < $L_x/6$ = 1.167 (ft)

$P_s^{(max)} = [\Sigma W/(L_x.L_y)].(1 + 6.e_{x,D+W}/L_x) \rightarrow e_{X,D+W} \leq L_x/6$

$P_s^{(max)} = 2.\Sigma W / [3.(L_x/2 - e_{x,D+W}).L_y] \rightarrow e_{X,D+W} > L_x/6$

$P_s^{(max)}$ = 200 (psf) < P_{sa} = 1,500 (psf) **O.K.**

$M_{Rx}^{(min)} = \Sigma W.(L_x/2 - |e_{x,D}|)$ = 16,065 (ft.lb) $\quad M_{Rx} / (0.6.\Sigma M_{ox})$ = 13.70 **O.K.**

$R_{sx} = c_s.L_{x(eff)}.L_y + P_p.L_y.(d_e - 0.16)^2$ = 2,295 (lb) $\quad R_{sx} / (0.6.\Sigma F_x)$ = 8.21 **O.K.**

Load Case 2, Wind Y-Direction : D + 0.6W $_y$

$e_{y,D+W} = |e_{y,D}| + 0.6.\Sigma M_{oy}/\Sigma W$ = 0.487 (ft) < $L_y/6$ = 0.667 (ft)

$P_s^{(max)} = [\Sigma W/(L_x.L_y)].(1 + 6.e_{y,D+W}/L_y) \rightarrow e_{y,D+W} \leq L_x/6$

$P_s^{(max)} = 2.\Sigma W / [3.(L_y/2 - e_{y,D+W}).L_x] \rightarrow e_{y,D+W} > L_x/6$

$P_s^{(max)}$ = 284 (psf) < P_{sa} = 1,500 (psf) **O.K.**

$M_{Ry}^{(min)} = \Sigma W.(L_y/2 - |e_{y,D}|)$ = 9,180 (ft.lb) $\quad M_{Ry} / (0.6.\Sigma M_{oy})$ = 4.10 **O.K.**

$R_{sy} = c_s.L_x.L_{y(eff)} + P_p.L_x.(d_e - 0.16)^2$ = 2,295 (lb) $\quad R_{sy} / (0.6.\Sigma F_y)$ = 4.30 **O.K.**

Client EVA GREEN | Job No.: MC02-01-01

Project Mendocino County SWITCHBOARD PAD FOUNDATION | Date: 6/28/24

SWITCHBOARD PAD WIND ANALYSIS | Engineer: 4STEL

EQUIPMENT PAD WIND ANALYSIS PER ASCE 7-16 Chapter 29

CBC ASD Load Combination 16-15 : 0.6.D + 0.6.W

Load Case 1, Wind X-Direction : 0.6.D + 0.6W$_x$

$e_{X,D+W} = |e_{X,D}| + 0.6.\Sigma M_{ox} / (0.6.\Sigma W) = 0.426$ (ft) < $L_x/6 = 1.167$ (ft)

$P_s^{(max)} = [0.6.\Sigma W/(L_x.L_y)].(1 + 6.e_{X,D+W}/L_x) \rightarrow e_{X,D+W} \leq L_x/6$

$P_s^{(max)} = 2 \times 0.6.\Sigma W / [3.(L_x/2 - e_{X,D+W}).L_y] \rightarrow e_{X,D+W} > L_x/6$

$P_s^{(max)} = 134$ (psf) < $P_{sa} = 2{,}000$ (psf) **O.K.**

$M_{Rx}^{(min)} = 0.6.\Sigma W.(L_x/2 - |e_{X,D}|) = 9{,}639$ (ft.lb) $M_{Rx} / (0.6.\Sigma M_{ox}) = 8.22$ **O.K.**

$\Sigma F_x = 466$ (lb)

$L_{x(eff)} = \min.[L_x, 3.(L_x/2 - e_{x,D+W})] = 7.000$ (ft)

$R_{sx} = c_s.L_{x(eff)}.L_y + P_p.L_y.(d_e - 0.16)^2 = 2{,}295$ (lb) $R_{sx} / (0.6.\Sigma F_x) = 8.21$ **O.K.**

Load Case 2, Wind Y-Direction : 0.6.D + 0.6W$_y$

$e_{y,D+W} = |e_{Y,D}| + 0.6.\Sigma M_{oy} / (0.6.\Sigma W) = 0.812$ (ft) > $L_y/6 = 0.667$ (ft)

$P_s^{(max)} = [0.6.\Sigma W/(L_x.L_y)].(1 + 6.e_{Y,D+W}/L_y) \rightarrow e_{y,D+W} \leq L_x/6$

$P_s^{(max)} = 2 \times 0.6.\Sigma W / [3.(L_y/2 - e_{y,D+W}).L_x] \rightarrow e_{y,D+W} > L_x/6$

$P_s^{(max)} = 221$ (psf) < $P_{sa} = 1{,}500$ (psf) **O.K.**

$M_{Ry}^{(min)} = 0.6.\Sigma W.(L_y/2 - |e_{y,D}|) = 5{,}508$ (ft.lb) $M_{Ry} / (0.6.\Sigma M_{oy}) = 2.46$ **O.K.**

$\Sigma F_y = 889$ (lb)

$L_{y(eff)} = \min.[L_y, 3.(L_y/2 - e_{y,D+W})] = 3.563$ (ft)

$R_{sy} = c_s.L_x.L_{y(eff)} + P_p.L_y.(d_e - 0.16)^2 = 2{,}295$ (lb) $R_{sy} / (0.6.\Sigma F_y) = 4.30$ **O.K.**

Client Eva Green | Job No.: 24-1007

Project Mendocino County SWITCHBOARD PAD FOUNDATION | Date: 6/28/24

SWITCHBOARD PAD - ANCHOR DESIGN | Engineer: 4STEL

EQUIPMENT ANCHORAGE

Strength Level Seismic Lateral Force Coefficient, C_P	=	**0.46**
Strength Level Seismic Vertical Force Coefficient, C_{PV}	=	**± 0.31**
Maximum Strength Level Wind Pressure, P_w	=	**20.7 psf**

	Equipment	W_{EQ} (lb)	H (ft)	H_{CG}	$A_{w,x}$ (ft^2)	$A_{w,y}$ (ft^2)
1	SWITCHBOARD	1790	7.63	4.58	22.56	45.75

LRFD Seismic Loads (0.9D + 1.0E)

n_v = No. of anchors resisting shear

d_{min} = Shortest distance between anchor rows

n_t = No. of anchors resisting uplift

$V_E = \Omega.C_p.W_{EQ}$

$V_A = V_E/n_v$

$T_A = (0.9W_{EQ}-E_v)/n_v - 0.6.H.V_E/(d_{MIN}.n_t) < 0$

$E_v = C_{PV}.W_{EQ}$

Ω = 2.5

LRFD Wind Loads (0.9D + 1.0W)

n_v = No. of anchors resisting shear

d_{min} = Shortest distance between anchor rows

n_t = No. of anchors resisting uplift

$V_W = P_w.A_w$

$V_A = V_W/n_v$

$T_A = 0.9W_{EQ}/n_v - 0.55.H.V_W/(d_{MIN}.n_t) < 0$

Seismic Anchor Demand

	UNIT	V_E (lb)	n_v	V_A (lb)	H_{CG} (ft)	d_{min} (ft)	n_t	E_v (lb)	T_A (lb)	ϕ_A (in)
1	SWITCHBOARD	830	8	**259**	4.6	1.750	4	553	**-1223**	1/2

Wind Anchor Demand

	UNIT	V_W (lb)	n_v	V_A (lb)	0.55H (ft)	d_{min} (ft)	n_t	T_A (lb)	ϕ_A (in)
1	SWITCHBOARD	945	8	**118**	4.2	1.750	4	**-365**	1/2

See attached Simpson Anchorage Calculations for worst case demand capacity ratios for anchors.

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Specifier's comments:

1 Input data

Anchor type and diameter:	**Kwik Bolt TZ2 - CS 1/2 (2) hnom2**
Item number:	2210254 KB-TZ2 1/2x3 3/4
Specification text:	Hilti KB-TZ2 stud anchor with 2.5 in embedment, 1/2 (2) hnom2, Carbon steel, installation per ESR-4266
Effective embedment depth:	$h_{ef,act}$ = 2.000 in., h_{nom} = 2.500 in.
Material:	Carbon Steel
Evaluation Service Report:	ESR-4266
Issued I Valid:	12/1/2023 | 12/1/2025
Proof:	Design Method ACI 318-19 / Mech
Stand-off installation:	
Profile:	
Base material:	cracked concrete, 2500, f_c' = 2,500 psi; h = 8.000 in.
Installation:	**hammer drilled hole, Installation condition: Dry**
Reinforcement:	tension: not present, shear: not present; no supplemental splitting reinforcement present edge reinforcement: > No. 4 bar

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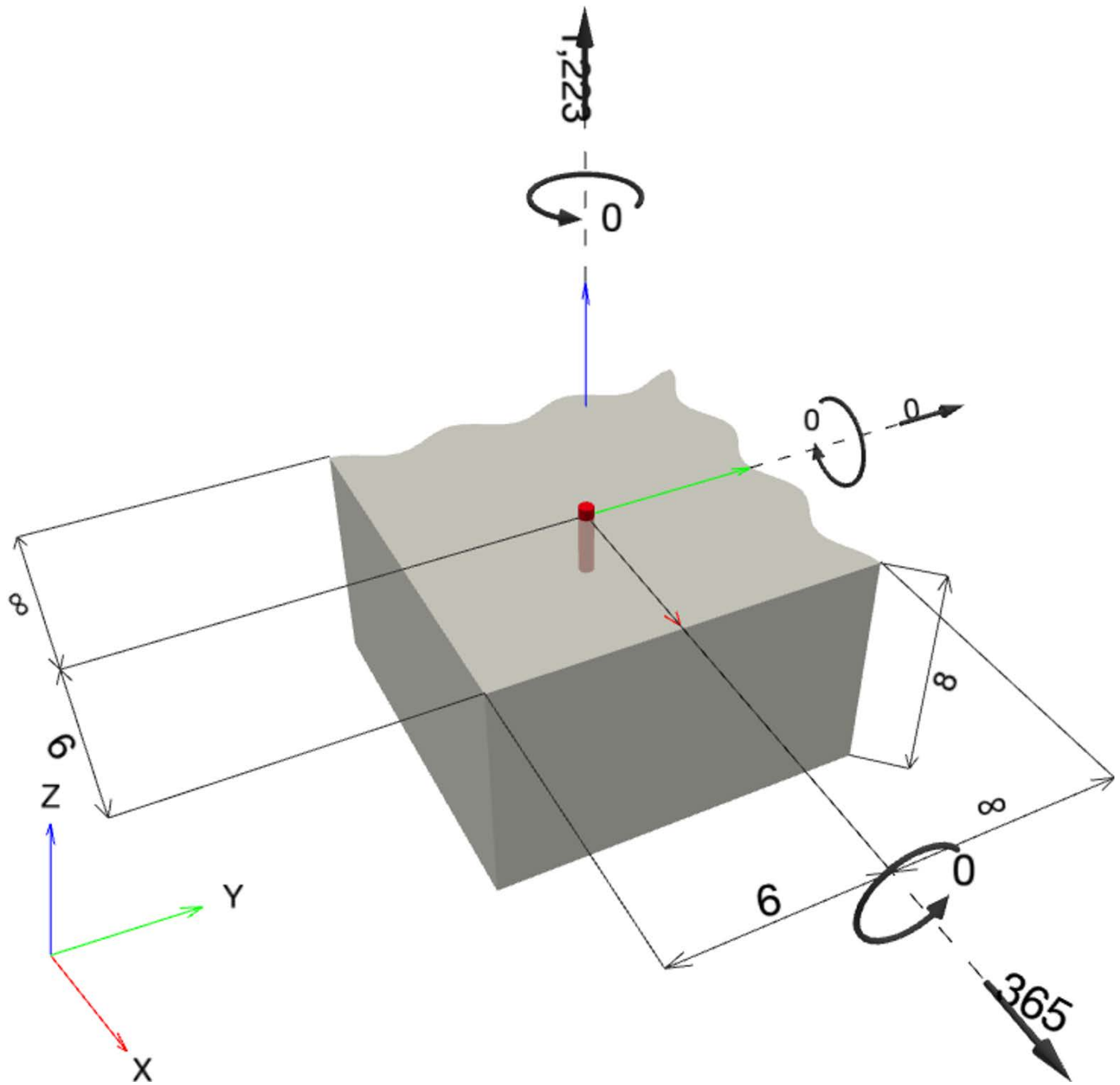
Geometry [in.] & Loading [lb, in.lb]



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1.1 Design results

Case	Description	Forces [lb] / Moments [in.lb]	Seismic	Max. Util. Anchor [%]
1	Combination 1	N = 1,223; V_x = 365; V_y = 0; M_x = 0; M_y = 0; M_z = 0;	no	64

2 Load case/Resulting anchor forces

Anchor reactions [lb]

Tension force: (+Tension, -Compression)

Anchor	Tension force	Shear force	Shear force x	Shear force y
1	1,223	365	365	0

3 Tension load

	Load N_{ua} [lb]	Capacity ϕ N_n [lb]	Utilization $\beta_N = N_{ua}/\phi$ N_n	Status
Steel Strength*	1,223	8,433	15	OK
Pullout Strength*	N/A	N/A	N/A	N/A
Concrete Breakout Failure**	1,223	1,930	64	OK

* highest loaded anchor **anchor group (anchors in tension)

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3.1 Steel Strength

N_{sa} = ESR value — refer to ICC-ES ESR-4266
$\phi\ N_{sa} \geq N_{ua}$ — ACI 318-19 Table 17.5.2

Variables

$A_{se,N}$ [in.^{2}]	f_{uta} [psi]
0.10	114,004

Calculations

N_{sa} [lb]
11,244

Results

N_{sa} [lb]	ϕ_{steel}	$\phi\ N_{sa}$ [lb]	N_{ua} [lb]
11,244	0.750	8,433	1,223

3.2 Concrete Breakout Failure

$N_{cb} = \left(\frac{A_{Nc}}{A_{Nc0}}\right) \psi_{ed,N}\ \psi_{c,N}\ \psi_{cp,N}\ N_b$ — ACI 318-19 Eq. (17.6.2.1a)
$\phi\ N_{cb} \geq N_{ua}$ — ACI 318-19 Table 17.5.2
A_{Nc} — see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)
$A_{Nc0} = 9\ h_{ef}^2$ — ACI 318-19 Eq. (17.6.2.1.4)
$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5h_{ef}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.4.1b)
$\psi_{cp,N} = MAX\left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5h_{ef}}{c_{ac}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.6.2.6.1b)
$N_b = k_c\ \lambda_a\ \sqrt{f'_c}\ h_{ef}^{1.5}$ — ACI 318-19 Eq. (17.6.2.2.1)

Variables

h_{ef} [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$	c_{ac} [in.]	k_c	λ_a	f'_c [psi]
2.000	6.000	1.000	5.500	21	1.000	2,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [lb]
36.00	36.00	1.000	1.000	2,970

Results

N_{cb} [lb]	$\phi_{concrete}$	$\phi\ N_{cb}$ [lb]	N_{ua} [lb]
2,970	0.650	1,930	1,223

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4 Shear load

	Load V_{ua} [lb]	Capacity ϕ V_n [lb]	Utilization $\beta_V = V_{ua}/\phi$ V_n	Status
Steel Strength*	365	3,599	11	OK
Steel failure (with lever arm)*	N/A	N/A	N/A	N/A
Pryout Strength**	365	2,079	18	OK
Concrete edge failure in direction x+**	365	2,851	13	OK

* highest loaded anchor **anchor group (relevant anchors)

4.1 Steel Strength

V_{sa} = ESR value refer to ICC-ES ESR-4266
ϕ $V_{steel} \geq V_{ua}$ ACI 318-19 Table 17.5.2

Variables

$A_{se,V}$ [in.^{2}]	f_{uta} [psi]
0.10	114,004

Calculations

V_{sa} [lb]
5,537

Results

V_{sa} [lb]	ϕ_{steel}	ϕ V_{sa} [lb]	V_{ua} [lb]
5,537	0.650	3,599	365

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4.2 Pryout Strength

$V_{cp} = k_{cp} \left[\left(\frac{A_{Nc}}{A_{Nc0}} \right) \psi_{ed,N} \psi_{c,N} \psi_{cp,N} N_b \right]$ ACI 318-19 Eq. (17.7.3.1a)

$\phi V_{cp} \geq V_{ua}$ ACI 318-19 Table 17.5.2

A_{Nc} see ACI 318-19, Section 17.6.2.1, Fig. R 17.6.2.1(b)

$A_{Nc0} = 9 h_{ef}^2$ ACI 318-19 Eq. (17.6.2.1.4)

$\psi_{ed,N} = 0.7 + 0.3 \left(\frac{c_{a,min}}{1.5 h_{ef}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.4.1b)

$\psi_{cp,N} = MAX \left(\frac{c_{a,min}}{c_{ac}}, \frac{1.5 h_{ef}}{c_{ac}} \right) \leq 1.0$ ACI 318-19 Eq. (17.6.2.6.1b)

$N_b = k_c \lambda_a \sqrt{f'_c} h_{ef}^{1.5}$ ACI 318-19 Eq. (17.6.2.2.1)

Variables

k_{cp}	h_{ef} [in.]	$c_{a,min}$ [in.]	$\psi_{c,N}$
1	2.000	6.000	1.000

c_{ac} [in.]	k_c	λ_a	f'_c [psi]
5.500	21	1.000	2,500

Calculations

A_{Nc} [in.^{2}]	A_{Nc0} [in.^{2}]	$\psi_{ed,N}$	$\psi_{cp,N}$	N_b [lb]
36.00	36.00	1.000	1.000	2,970

Results

V_{cp} [lb]	$\phi_{concrete}$	ϕV_{cp} [lb]	V_{ua} [lb]
2,970	0.700	2,079	365

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4.3 Concrete edge failure in direction x+

$V_{cb} = \left(\frac{A_{Vc}}{A_{Vc0}}\right) \psi_{ed,V} \psi_{c,V} \psi_{h,V} \psi_{parallel,V} V_b$ — ACI 318-19 Eq. (17.7.2.1a)

$\phi V_{cb} \geq V_{ua}$ — ACI 318-19 Table 17.5.2

A_{Vc} see ACI 318-19, Section 17.7.2.1, Fig. R 17.7.2.1(b)

$A_{Vc0} = 4.5 c_{a1}^2$ — ACI 318-19 Eq. (17.7.2.1.3)

$\psi_{ed,V} = 0.7 + 0.3\left(\frac{c_{a2}}{1.5c_{a1}}\right) \leq 1.0$ — ACI 318-19 Eq. (17.7.2.4.1b)

$\psi_{h,V} = \sqrt{\frac{1.5c_{a1}}{h_a}} \geq 1.0$ — ACI 318-19 Eq. (17.7.2.6.1)

$V_b = \left(7\left(\frac{l_e}{d_a}\right)^{0.2} \sqrt{d_a}\right) \lambda_a \sqrt{f'_c} c_{a1}^{1.5}$ — ACI 318-19 Eq. (17.7.2.2.1a)

Variables

c_{a1} [in.]	c_{a2} [in.]	$\psi_{c,V}$	h_a [in.]	l_e [in.]
6.000	6.000	1.200	8.000	2.000

λ_a	d_a [in.]	f'_c [psi]	$\psi_{parallel,V}$
1.000	0.500	2,500	1.000

Calculations

A_{Vc} [in.^{2}]	A_{Vc0} [in.^{2}]	$\psi_{ed,V}$	$\psi_{h,V}$	V_b [lb]
120.00	162.00	0.900	1.061	4,799

Results

V_{cb} [lb]	$\phi_{concrete}$	ϕV_{cb} [lb]	V_{ua} [lb]
4,072	0.700	2,851	365

5 Combined tension and shear loads, per ACI 318-19 section 17.8

β_N	β_V	ζ	Utilization $\beta_{N,V}$ [%]	Status
0.634	0.176	5/3	53	OK

$\beta_{NV} = \beta_N^{\zeta} + \beta_V^{\zeta} <= 1$

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6 Warnings

- The anchor design methods in PROFIS Engineering require rigid anchor plates per current regulations (AS 5216:2021, ETAG 001/Annex C, EOTA TR029 etc.). This means load re-distribution on the anchors due to elastic deformations of the anchor plate are not considered - the anchor plate is assumed to be sufficiently stiff, in order not to be deformed when subjected to the design loading. PROFIS Engineering calculates the minimum required anchor plate thickness with CBFEM to limit the stress of the anchor plate based on the assumptions explained above. The proof if the rigid anchor plate assumption is valid is not carried out by PROFIS Engineering. Input data and results must be checked for agreement with the existing conditions and for plausibility!
- Condition A applies where the potential concrete failure surfaces are crossed by supplementary reinforcement proportioned to tie the potential concrete failure prism into the structural member. Condition B applies where such supplementary reinforcement is not provided, or where pullout or pryout strength governs.
- Refer to the manufacturer's product literature for cleaning and installation instructions.
- For additional information about ACI 318 strength design provisions, please go to https://submittals.us.hilti.com/PROFISAnchorDesignGuide/
- Hilti post-installed anchors shall be installed in accordance with the Hilti Manufacturer's Printed Installation Instructions (MPII). Reference ACI 318-19, Section 26.7.

Fastening meets the design criteria!

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7 Installation data

Anchor type and diameter: Kwik Bolt TZ2 - CS 1/2 (2) hnom2

Profile: -

Item number: 2210254 KB-TZ2 1/2x3 3/4

Hole diameter in the fixture: -

Maximum installation torque: 602 in.lb

Plate thickness (input): -

Hole diameter in the base material: 0.500 in.

Hole depth in the base material: 2.750 in.

Drilling method: Hammer drilled

Minimum thickness of the base material: 4.000 in.

Cleaning: Manual cleaning of the drilled hole according to instructions for use is required.

Hilti KB-TZ2 stud anchor with 2.5 in embedment, 1/2 (2) hnom2, Carbon steel, installation per ESR-4266

7.1 Recommended accessories

Drilling	Cleaning	Setting
• Suitable Rotary Hammer • Properly sized drill bit	• Manual blow-out pump	• Torque controlled cordless impact tool • Torque wrench • Hammer

Coordinates Anchor in.

Anchor	x	y	c_{-x}	c_{+x}	c_{-y}	c_{+y}
1	0.000	0.000	-	6.000	6.000	-

8 Remarks; Your Cooperation Duties

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